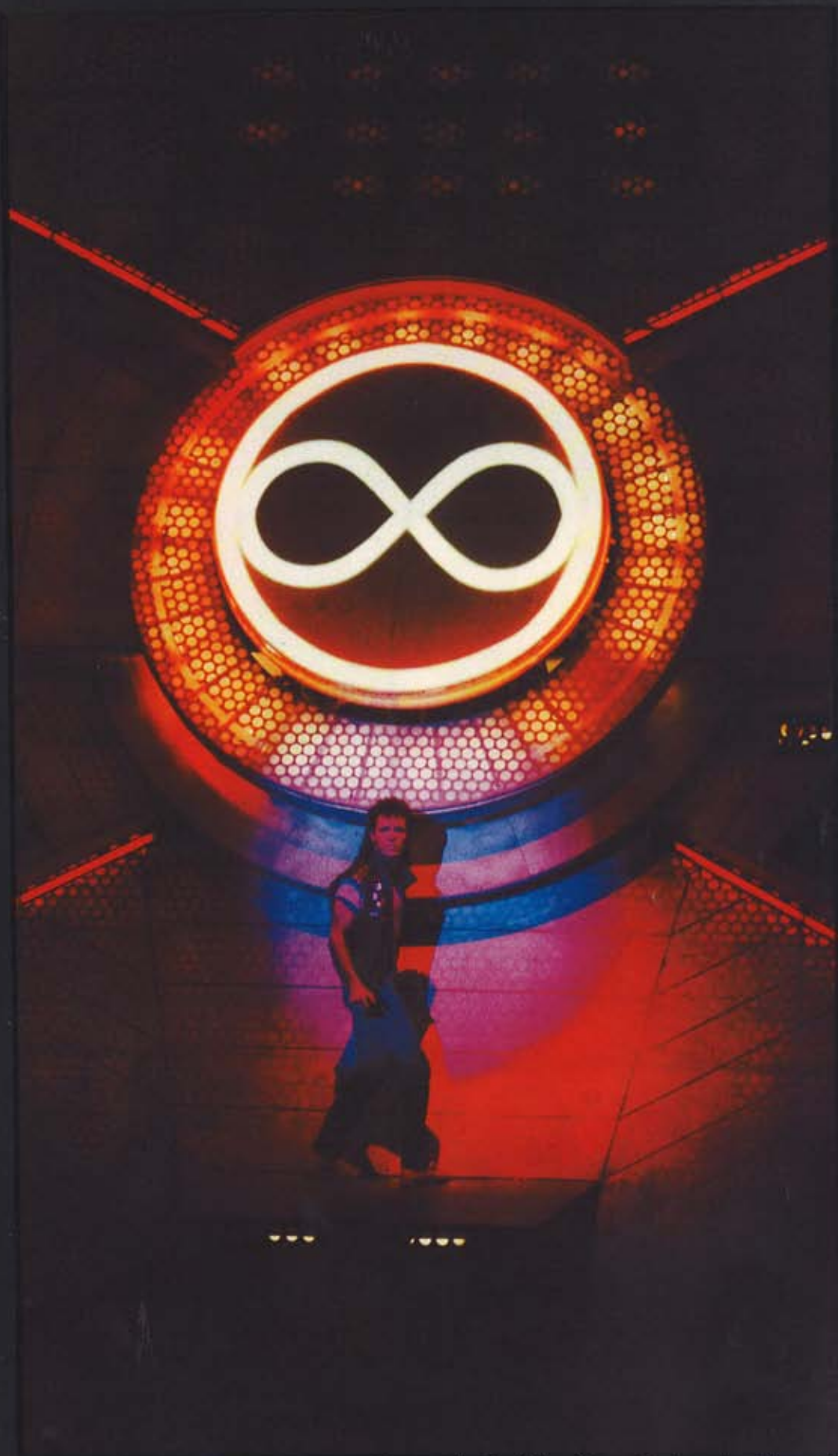


LIGHTING+SOUND *International*



PLASA

published in association with the Professional Lighting and Sound Association

April 1986
Volume 1 No.6

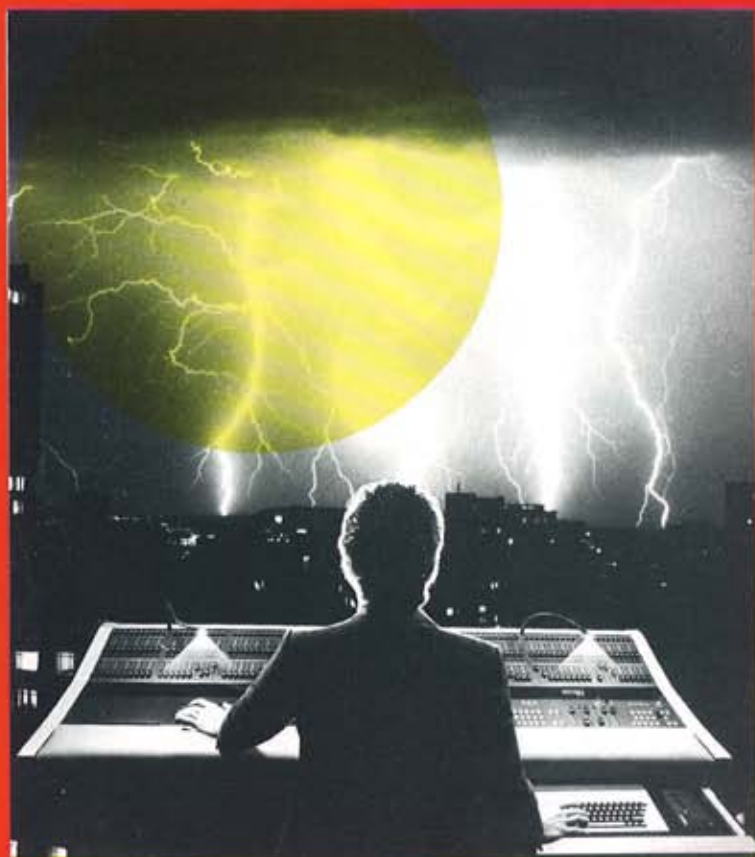
'Time' at the Dominion Theatre London—the Release of Power with the Rock Star (Cliff Richard). See exclusive feature in this issue.

£1.50

~~~~~

# CELCO SERIES 2

## lighting control



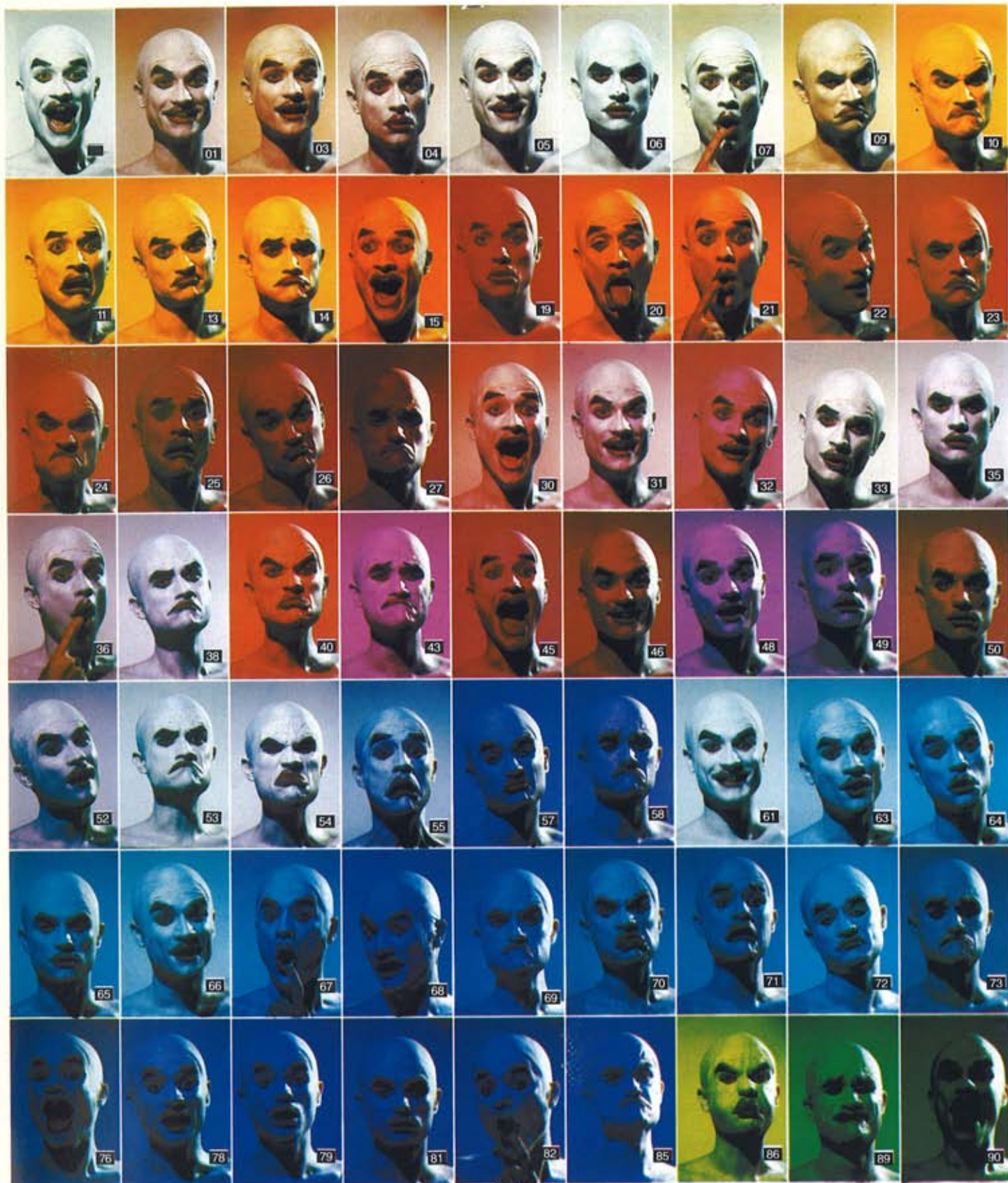
SERIES 2 CONTROL BOARDS



SERIES 2 DIMMER SYSTEMS

MCS COLOUR CHANGE CONTROL

The *Series 2* range of lighting control systems are designed and manufactured by Celco Limited.  
For further information please contact our distributors: U.S. Sales - Celco Inc. 262a Eastern Parkway,  
Farmingdale, NY 11735, U.S.A. Tel: (516) 249-3662 **Worldwide Distributors** - Cerebrum Lighting (Sales &  
Hire) Ltd., The Stage & Effects Lighting Centre, 168 Chiltern Drive, Surbiton, Surrey KT5 8LS, England,  
Tel: 01-390 0051, Telex: 892337 Celco G



# 73 ways to help you express yourself.

With the Supergel system there are no restrictions on your creative freedom.

You can get the exact effect you want on any light in your theatre, club or television studio. What's more, Supergel stands up better and lasts longer than any other colour filter. And if that weren't enough it's also the first truly 'self-extinguishing' gel.

Unfortunately we didn't have room to show you the entire Supergel range.

But if you fill in the coupon we will send you a free colour poster version of all 73 faces.

Roscolab Limited, 69/71 Upper Ground, London SE1 9PQ  
Tel: 01-633 9220 · Telex 8953352 · Roslab G ·

Name \_\_\_\_\_

Company \_\_\_\_\_

Address \_\_\_\_\_

Tel \_\_\_\_\_

**ROSCO**

LONDON  
HOLLYWOOD • NEW YORK  
MADRID • TOKYO



**Le Maitre Lighting and Effects lead the way in fulfilling the growing demand for innovative, safe and reliable products offering a new spectrum of spectacular visual effects.**

**We have staged countless firework displays, including the televised Hyde Park extravaganza and the Edinburgh Festival.**

**Le Maitre effects, including our world renowned smoke machines, are used in film, TV and theatre work, tours with major bands and production companies, air-displays, battle re-enactments and Son-et-lumiere spectacles.**

**See us at the:  
ABTT Show, London, (March),  
SIEL Show, Paris (April)  
and the SIB Show, Rimini (May)**

**LeMaitre**  
lighting and effects

**316 Purley Way, Croydon CR0 4KJ, England. Telephone 01-686 9258. Telex: 883220.**

# LIGHTING+SOUND *International*

## APRIL 1986

|    |                                           |
|----|-------------------------------------------|
| 9  | NEWS in Lighting + Sound International    |
| 15 | Theatrical Trading at the ABTT Trade Show |
| 21 | The Two Matcham's                         |
| 23 | Opera-Bastille                            |
| 25 | The Splitting Image                       |
| 29 | On Tour                                   |
| 33 | Lighting 'Time'                           |
| 45 | "Give Me Some Light"                      |
| 49 | Sound Around                              |
| 51 | SIB Rimini 86                             |
| 53 | Show Page with PLASA News                 |
| 54 | Profile                                   |
| 55 | Equipment News                            |
| 61 | PLASA Members                             |
| 62 | Directory                                 |



David Hersey, Richard York and Ralph Koltai pictured prior to the opening of the ABTT Silver Jubilee Conference 'Presentation 2010' at the Novotel, Hammersmith in late March. The conference was chaired by Richard Pilbrow, and a report will be included in our May issue.

## LIGHTING+SOUND *International*

Editor and Publisher: John Offord.  
Advertising Manager: Ann Holland.

Published monthly by John Offord (Publications) Ltd.,  
12 The Avenue, Eastbourne, East Sussex BN21 3YA.  
Telephone: Eastbourne (0323) 645871.

## PLASA

published in association with the  
Professional Lighting and Sound Association

ISSN 0268-7429

© John Offord (Publications) Ltd.

No part of this magazine may be reproduced without the permission of the Editor.

Annual Subscriptions: UK £20.00; Europe £25.00; airmail £40.00; US \$70.00.

▶ You're looking at the most exciting developments in sound reinforcement in the world:

The Turbosound TSE and TMS Series.

Products with a proven pedigree from live sound users like Kool and the Gang, King, Grover Washington, George Benson and David Bowie to permanent installations in prestige concert halls and venues around the world.

They're so versatile that, by combining models from the two ranges, they're as perfect in small clubs and discotheques as they are at massive outdoor festivals.

The choice: The TSE Integrated

## Turbosound. Nothing in the world comes close.

Series, or the TMS Full-range Series. Both are a system installer's dream – singly, in multiple arrays, fixed or free standing, in installations or for touring.

The incredibly compact enclosures with their unique TurboMid™ and TurboBass™ devices\* create a sound that's radically different from ordinary loudspeakers.

Crystal clear highs, a seamless midrange and a tight, punchy bass combine to convey the 'feel' of music like nothing you've heard before.

Even at an SPL of 141dB, they produce the dynamics and clarity of a top-level hi-fi system – without the need for compensating electronics.

Who else can say that?

Richard Symons (Disco International) said: "They have a remarkably even response... extremely well-designed... an impressive clean sound. The excitement is there but no fatigue... superb quality."

Dan Valberg, chief technician of Borsen – Stockholm's top nightclub – was asked what, if money was no object, he'd do to improve his Turbosound system.

His answer? "Nothing."

In fact, nothing else even comes close.

Now the choice of the world's leading venues and performers is available to you.



Call Tim Chapman or David Bearman to arrange a personal audition at our London demo room. And take a listen to the best in the world.

**Turbosound**  
A member of the Turbosound Group of Companies. London New York

Turbosound Sales Ltd. 202-208 New North Road, London N1 7BL  
Tel: (01) 226-0099 Telex 265612

Turbosound, Inc. 611 Broadway #841, New York, New York 10012  
Tel: (212) 460-9940 Telex 230199

TSE INTEGRATED SERIES: TSE-111 Mid/High Pack (150W RMS, 250Hz – 18kHz). TSE-118 Bass Unit (300W RMS, 45Hz – 350Hz). TSE-218 Bass Unit (600W RMS, 40Hz – 350Hz). TMS FULL-RANGE SERIES: TMS-1 (250W RMS, 90Hz – 17kHz). TMS-2A (400W RMS, 65Hz – 17kHz). TMS-3 (775W RMS, 55Hz – 17kHz). TMS-4 (450W RMS, 45Hz – 17kHz). SUB BASS: TSW-124 (300W RMS, 27Hz – 300Hz).

\*The TurboBass™ and TurboMid™ devices are covered worldwide by Principle Patents, and not simple design patents. The concepts embodied in their design, are, therefore, entirely unique. (See brochures for further information).

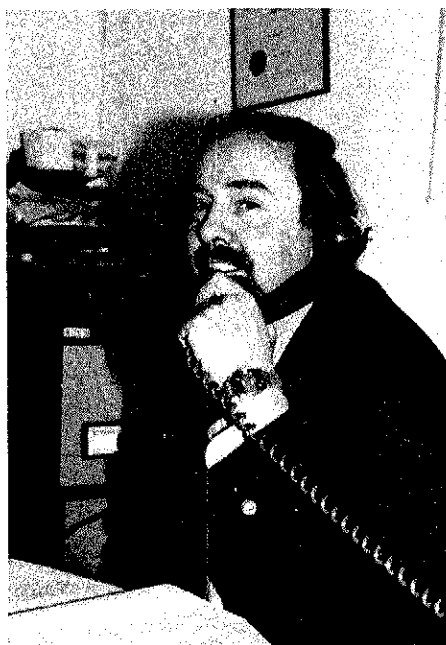
Worldwide distributors: Australia: Creative Audio Pty Ltd Melbourne (03) 354-3987 Austria: Audiosales Moedling (2236) 888145 Canada: Belisle Acoustique Inc Quebec (514) 691-2584  
China: Wo Kee Engineering Ltd Hong Kong (5) 249073/5 Denmark: Per Meistrup Productions Karlslunde (02) 151300 France: Regiscene Paris (01) 4374-5836 Greece: Alpha Sound Athens (01) 651-31300  
Holland: Ampco Holland b.v. Utrecht (30) 433134 Hong Kong: Tom Lee Music Co Ltd Hong Kong (3) 722-1098 Indonesia: PT Auvindo Merien Prima Jakarta (01) 323029/320704  
Israel: Barkal Ltd Ramat-Gan (03) 735178/732044 Italy: Audio Link Parma (0521) 598723/4 Milan (02) 285-0334 Japan: Matsuda Trading Co Tokyo (03) 295-4731 Korea: Bando Pro-Audio Inc Seoul (02) 546-5491  
Malaysia: Atlas Hi-Fi Sdn Bhd Kuala Lumpur (03) 432104/432077 Norway: Nordtek Equipment a/s Oslo (02) 231590 Singapore: Atlas Sound (Pte) Ltd Singapore 220-4484 Spain: Lexon s.a. Barcelona (03) 203-4804  
Sweden: Inter Music a.b. Skövde (500) 85260 Switzerland: Sinec Schoenenwerd (04) 413-747 Thailand: Bangkok Cine/Graphic Center Bangkok (2) 314-3570 UK: Turbosound Sales Ltd London (01) 226-0099  
USA: Turbosound Inc New York (212) 460-9940 West Germany: Adam Hall GmbH Uslingen (6081) 16031

# LIGHTING & SOUND *International News*

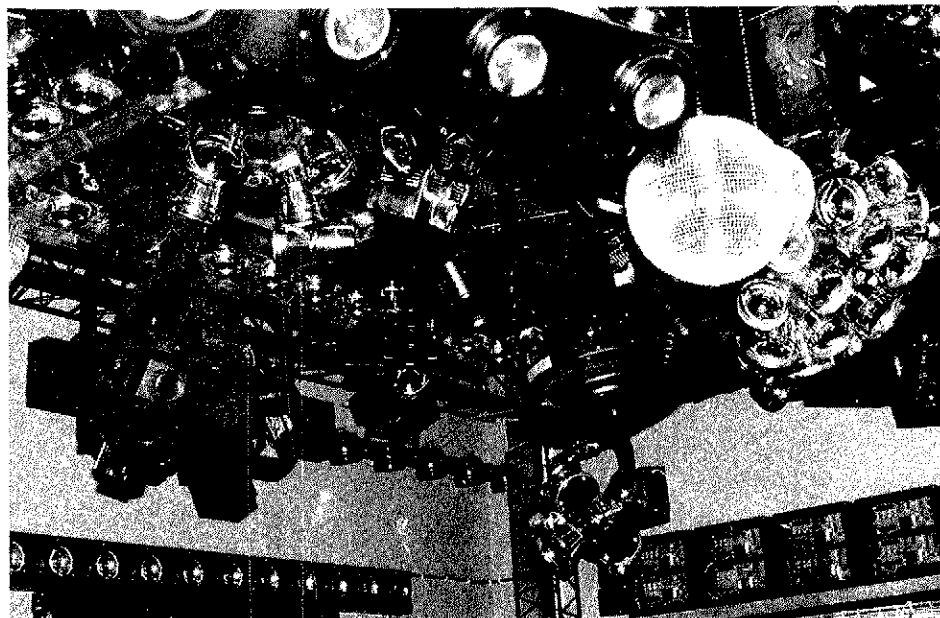
## New Showroom for Jivelight

A small but very plush new showroom opened at the offices of Jivelight Limited in Hammersmith in mid-March. It will enable sales director Dave Winfield to show off the full range of club and disco lighting and effects units, controllers and power packs. When the whole lot is set in motion, aided by a burst or two from the new Jivelight Megamist fog machine, it's certainly a show worth seeing and for prospective purchasers an ideal chance to see individual items in action.

Jivelight import most of their equipment from the Spanish manufacturer Multiluz S.A. with a few items from France and Switzerland. Their own manufacture is the JL70 super pin spot, and a range of glass-fronted mains power packs. They are exclusive UK dealers for Multiluz products, selling through trade outlets only, and have 20 major distributors throughout the UK.



Jivelight sales director Dave Winfield.



Jivelight's new showroom shows off the complete range of products marketed by the company.

## No Cowboys at Wigwam

This year will be, without doubt, the busiest ever for Wigwam Acoustics. They have just bought in extra stocks of Meyer Sound equipment to meet demand for these systems, and will need to acquire even more over the summer months, Mike Spratt told L+S.

They are currently involved in the Crackerjack shows, sub-hire of Meyer equipment for Matt Bianco and New Order, plus P.A. and backline for the Johnny Cash Tour, and the International Country Music Festival in Ireland. Over the coming months they will be sending out systems on the Rock Gospel Show tour featuring Sheila Walsh and Alvin Stardust, and also providing sound for the Freddie Starr tour and the Cannon and Ball summer shows.

In July they are off to Amsterdam to provide the sound at The Conference for Itinerant Evangelists,

featuring Dr. Billy Graham. This is the largest event of its kind in which Wigwam have been involved. The main systems will be Meyer, as used on Mission England and last year's missions to Hungary and Rumania. Speaking of systems installed by Wigwam Acoustics, Billy Graham told the press at the time: "This is the clearest sound I have heard in 30 years." They are also working with Dr. Graham in Paris during work on various "Bible Weeks" held at Country Showgrounds throughout the country, and also the International Eisteddod in Wales.

The company will also be very busy with installations. Prestige venues include the North and Central Piers and the Tower Circus in Blackpool, plus regular church, club and theatre installation.

Apart from touring and installations they also operate a sales counter for professional quality sound equipment and a hire service for anything from a mic. stand to a complete P.A. package including transport.

## Around the World with Soundcraft

In Japan, Soundcraft Electronics have just completed their most prestigious deal to date. A highly customised 56 channel TV24 broadcast console has been installed into a mobile recording studio for Tamco, one of the country's largest recording facilities.

At Grieghallen in Bergen, Norway, Soundcraft equipment will be providing the sound for the coming Eurovision Song contest in early May. The complete system will be set up by Lydrommet, their Norwegian distributor.

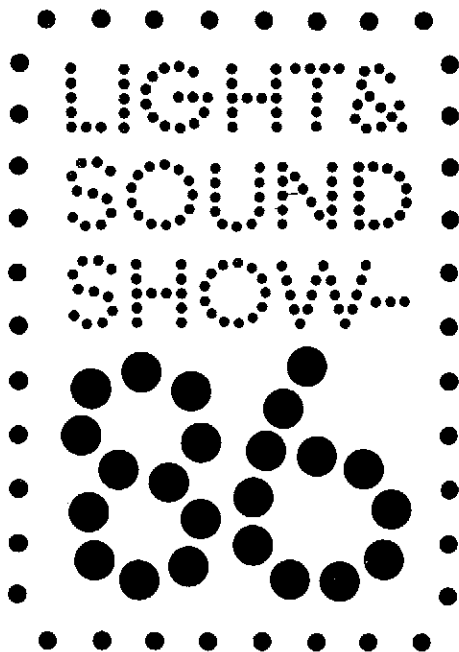
Back home, in the North London Church studio owned by the Eurythmics, producers David A. Stewart has ordered the first new SCM Saturn tape machine from Soundcraft for their new studio, in addition to a complete package of equipment. The existing 24-track studio is also due for an upgrade with a TS24 56 channel in-line console and another SCM Saturn 24-track tape machine.



David A. Stewart pictured at the AES Montreux launch of the Soundcraft Saturn.



The highly customised Soundcraft TV24 inside the new Tamco OBV.



**Light & Sound Show**  
**31 Aug - 3 Sep 1986**  
**11am - 6pm daily**  
**11am - 5pm Wed 3rd**

**NOVOTEL Hammersmith**  
**London W6 8DR**

**Britain's top professional trade show**

Professional lighting · sound · laser systems  
 audio-visual systems · special effects

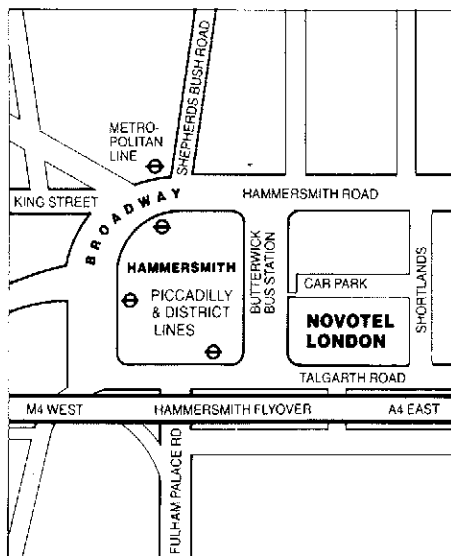
An exhilarating display of the latest innovations  
 in lighting, sound and video equipment available from  
 Britain's leading manufacturers and suppliers

Tickets available at door  
 No admittance to children under 15

**How to get there**

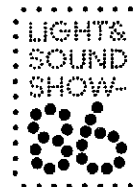
By car: to Shortlands Road entrance  
 Overflow car park in Glenthorne Road,  
 five minutes walk

By tube: to Hammersmith, exit Broadway  
 Novotel entrance opposite Butterwick Bus Station



**ALL STANDS  
 SOLD**

**Exhibitors include**



- |                                        |                                   |
|----------------------------------------|-----------------------------------|
| A.C.T.                                 | LYNX LIGHTING LTD                 |
| ADDA                                   | MALHAM LTD                        |
| AJS LONDON THEATRE CENTRE              | MARTIN SOUND & LIGHT LIMITED      |
| AMARK                                  | MICO LIGHTING LTD                 |
| ANYTRONICS LTD                         | MODE ELECTRONICS LIMITED          |
| ASTRON                                 | MULTIFORM LIGHTING                |
| AUDILEC (DISTRIBUTION) LTD             | MUSICRAFT LTD                     |
| AVITEC                                 | MYSTICAL LIGHTING                 |
| BEAM ELECTRONICS LTD                   | NIK MILNER PHOTOGRAPHY            |
| BOSE (UK) LTD                          | N.J.D. ELECTRONICS                |
| CEREBRUM LIGHTING LTD                  | NORTHERN LIGHTS                   |
| CITRONIC LTD                           | OPTIKINETICS LTD                  |
| CLOUD ELECTRONICS LTD                  | ORTOFON (UK) LTD                  |
| COURT ACOUSTICS SALES LTD              | PANCAN LTD                        |
| DISCO & CLUB TRADE INTERNATIONAL       | PULSAR LIGHT                      |
| DISCO MIRROR                           | RAMSA                             |
| DWARF SOUND REINFORCEMENT              | RED PROFESSIONAL SOUND LIMITED    |
| ELECTRONIC LIGHTING & MUSIC            | R.K. LIGHTING LTD                 |
| FORMTRONIC LTD                         | ROSSULA LTD                       |
| FORMULA SOUND LTD                      | SATEL (UK) LTD                    |
| HARRISON INFORMATION<br>TECHNOLOGY LTD | SATURN SOUND & LIGHT LTD          |
| HH ELECTRONIC LTD                      | SCOTT SOUND SYSTEMS               |
| H.W. INTERNATIONAL                     | SIS RECORDING STUDIOS LIMITED     |
| ICELECTRICS LTD                        | SOUND ELECTRONICS LIMITED         |
| ILP ELECTRONICS LTD                    | SQUIRE LIGHT & SOUND LTD          |
| JEM SMOKE MACHINE CO LTD               | S & S SOUND & LIGHTING            |
| LASER CREATIONS                        | STARLIGHT DESIGN                  |
| LASER SYSTEMS LIMITED                  | STRAND LIGHTING                   |
| LE MAITRE LIGHTING & EFFECTS           | TANNOY LIMITED                    |
| LIGHT ENGINEERING                      | TRAXS                             |
| LIGHTFACTOR                            | TURBOSOUND SALES LTD              |
| LIGHTRONIX                             | W.B. LIGHTING LIMITED/COEMAR (UK) |
| LUTON SOUND & LIGHTING LTD             | WILMEX LIMITED                    |
|                                        | ZERO 88                           |

For further information contact David Street  
 10 Barley Mow Passage, Chiswick, London W4 4PH  
 Telephone 01-994 6477

SPONSORED BY



PROFESSIONAL LIGHTING AND SOUND ASSOCIATION



## Lighting Dimensions Taken Over

Patricia MacKay, publisher of Theatre Crafts magazine, has announced that they have completed the purchase of "Lighting Dimensions", the California-based international lighting magazine produced by Fred Weller.

MacKay has announced that the editorial coverage will be expanded to cover the whole spectrum of the industry including architectural, interior design, photographic, restaurants, landscape and so on in addition to the more usual performance features.

The first issue under the new ownership will make its debut at the Lighting World IV show in Los Angeles from May 11-13.

The magazine will be based at 135 5th Avenue, NY 10010 New York telephone (212) 677 5997.

## Harrison in Australia

Harrison Information Technology Limited have announced the appointment of Syntec International of 60 Gibbes Street, Chatswood, NSW as their sole agent for the Australian market.

## Sweetings Bedford opens May

A new nightclub, Sweetings, is about to launch Bedford's night life into the 1990s. The £1.2m development in St. Peter's Street, Bedford is owned by night club showman Chris Sweeting.

The club, which accommodates up to 600 guests, will be divided into two venues: an up-to-the-minute discotheque offering the latest in laser

lighting and sound technology and Sweetings 2, where the over 25s will be able to wine and dine in sophisticated surroundings.

A ticket-only VIP premiere night is to be held at Sweetings on May 29th followed by the first public night on May 30th, and to launch the night club Chris, with the help of an international star, will give away £25,000 to charity on the opening night.

"This will be the first time Bedford has had a



Sweetings from St Peter's Street, Bedford. Both the carpet shop and the Gold-Oro shops have been bought by the club.

purpose-built night club using all the technology of the 1990s. This will be tomorrow's world today," Sweeting told L+S.

"No longer will people have to travel to Milton Keynes, Luton or London to visit a major night spot."

The club, situated in the former church and school hall, offers nearly 8,000 sq. ft. of entertainment floor space to visitors. The interior has been completely gutted and refurbished, under the guidance of Chelmsford interior designer Norman Gray, to transform the premises into a premiere.

The lighting system, designed by Chris and his general manager Mark Harrison, includes the world's only Kryptonic Monorail system. Both Sweetings and Sweetings 2 have video systems on which can be screened laser and computer graphics videos, programmes picked up by the satellite dish on the roof of the building and live camera shots of customers dancing.

On the ground floor in the discotheque for the Over 20s, a laser lighting system is installed which is reflected up through a specially adapted chimney into Sweetings 2.

The total cost of this technology has topped £250,000.

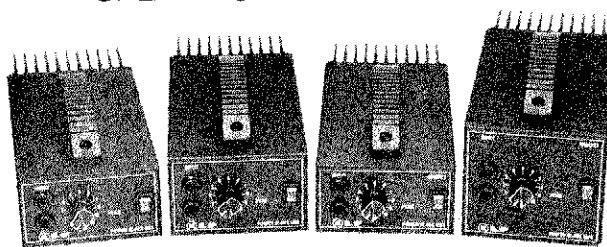
The club is a dream come true for 36-year-old Chris Sweeting who has a vast knowledge of the entertainment industry, having worked his way up from glass collector to DJ and now night club owner. A chance find in September 1985 by friend Bob Broomhall, licensee of The Park Restaurant in Bedford, put Chris on the right track for this dream venture.

Chris has brought with him to Bedford his own management team with whom he worked previously. They are: general manager Mark Harrison, Australian administration manager Jacqui Keane and lighting man Paul Green.

The main contractors, Mountcrest Services Ltd. of Leicester are now working around the clock to prepare the venue for the grand opening on Thursday 29th May.



PRICES AND PERFORMANCE FIGURES SPEAK FOR THEMSELVES!



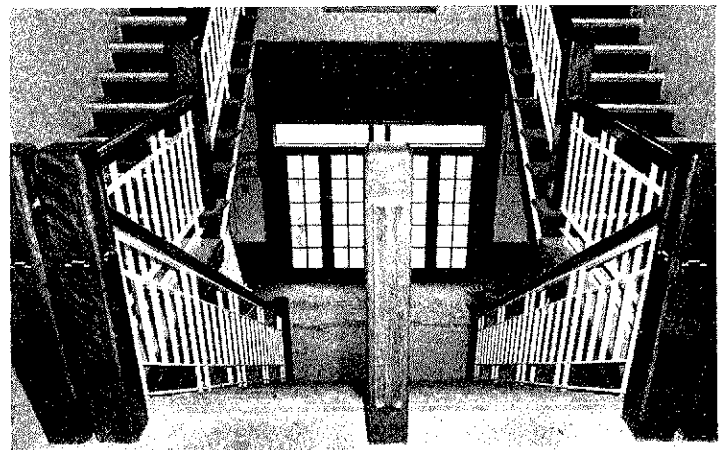
£79.95      £99.95      £89.95      £109.95

| RANGE OF SLAVES                            | US12                              | US22                              | US32                              | US42                               |
|--------------------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|------------------------------------|
| Output Power - full impedance              | 60W rms into 4Ω                   | 120W rms into 4Ω                  | 90W rms into 8Ω                   | 120W rms into 8Ω                   |
| Total Harmonic Distortion (Typical) @ 1KHz | 0.01%                             | 0.01%                             | 0.005%                            | 0.005%                             |
| Frequency Response (-3dB)                  | 15Hz - 50KHz                      | 15Hz - 50KHz                      | 15Hz - 100KHz                     | 15Hz - 100KHz                      |
| Signal to Noise Ratio (DIN AUDIO)          | 100dB                             | 100dB                             | 100dB                             | 100dB                              |
| Input Sensitivity                          | 500mV rms                         | 500mV rms                         | 500mV rms                         | 500mV rms                          |
| Input Impedance                            | 100KΩ                             | 100KΩ                             | 100KΩ                             | 100KΩ                              |
| Weight in grammes                          | 410                               | 570                               | 420                               | 850                                |
| Size in mm                                 | 120x78x40                         | 120x78x50                         | 120x78x40                         | 120x78x100                         |
| Fuse A.C. 20mm Fuse Speaker 20mm           | A/S 500mA Q/B 5.5A                | A/S 1.25A Q/B 3.15A               | A/S 500mA Q/B 2.0A                | A/S 1.25A Q/B 2.5A                 |
| Weight                                     | 2.5 Kilo                          | 3.3 Kilo                          | 2.5 Kilo                          | 3.7 Kilo                           |
| Size                                       | 7cm = Ht. 12cm = Wdt. 29.5cm = L. | 8cm = Ht. 12cm = Wdt. 29.5cm = L. | 7cm = Ht. 12cm = Wdt. 29.5cm = L. | 11cm = Ht. 12cm = Wdt. 29.5cm = L. |

THE ILP GENERATION OF MUSICAL PRODUCTS



GRAHAM BELL HOUSE · ROPER CLOSE · CANTERBURY · KENT CT2 7EP  
Telephone: (0227) 454778 (4 lines) Telex: 965780 ILPAMP



View down the stairs leading to Sweetings 2. In the foyer is the main entrance off St Peter's Street.



Looking from the DJ's stand across the dance floor of Sweetings.

## Ultimate Shakespearean Venue

A £750,000 appeal has been launched to enable a group of enthusiasts to build a replica of the Fortune Theatre, formerly situated in Golden Lane, near Cripplegate in London, and which was last open almost 350 years ago.

The South West of England Shakespeare Trust will build the theatre on the site of old stables at Chilworthy near Taunton in Somerset and will base their designs on the original builder's contract of 1600. The cost in those days was £440.

The Trust has high hopes of launching its first production on Shakespeare's birthday, April 23rd, in 1989. And with names like Lord Olivier, Andrew Lloyd Webber and Dame Peggy Ashcroft as members, who will doubt that it will happen.

## Audix on Tyneside and Beyond

An order worth £120,000 from Sir Robert McAlpine and Sons Limited to install an extensive public address system for Phase I of the Nissan car plant in Tync and Wear, has been awarded to Audix Limited.

The company have also announced major recent orders for the Greek television channel ERT-2 to include 3 MXT1200 modular mixing desks and other equipment. In addition, three separate orders have recently been received for the supply of MXT1200's to Radio Television Hong Kong.

## Prize of a Lifetime

Two thousand DJ's from all over the world hit London's Hippodrome on March 16 for the World Disco Mixing Championships, competing for the title and the coveted prize of a £6,000 Video Jockey Console—a computer-controlled videodisc mixer.

The VJC has three videodisc players offering very high quality sound and vision together with built-in monitors for selecting, cueing and previewing. It has its own integrated audio mixer and receives satellite transmission as well as live video from remotely controlled cameras. For the skilled DJ, it offers stunning visual capabilities to the sound of the latest music. The prize was donated by REW Video, a Thorn EMI company.

Winner was the New York DJ "Cheese".



New York DJ "Cheese"—winner of the World Disco Mixing Championships and a £6,000 Video Jockey Console from REW Video.



The Quadrant, Redhill town centre.

## Redhill Harlequin

Behind the impressive facade of the Warwick Quadrant site in Redhill town centre in Surrey, lies an exciting new facility for the local community.

The Harlequin will open its doors with a theatrical flourish in December this year. The original scheme was shown to the public in 1980, and is part of the general redevelopment of the town centre. It was enthusiastically received, and detailed design work then continued.

The original conceptual design work was carried out by Building Design Partnership, and John Wyckham is theatre consultant, being appointed prior to the public meetings in November 1980. The main auditorium is a multi-purpose venue with excellent access, comprising flat floor, together with a balcony at one end with four rows of permanently installed seats. Hinged wall panels can be opened out and a pelmet flown in to produce a temporary proscenium arch. Retractable seating will provide tiered seating for an audience of 500. There will be flying facilities over the 'stage', with 30 hemp lines provided.

Lighting control will be by a 120 way Chameleon desk by DTL, and it will be located in the control room at the rear of the balcony. Dimmers will include 24 5k (to 32a CEE 17 s/o with changeover to 4 15a 3-pin s/o) and 96 2.5k (to 15a 3-pin s/o). A

200a TPN designated Special Effects will be situated adjacent to the prompt corner facilities panel.

For performance sound a Soundcraft 400B 12/4/2 mixer desk will be provided. Other equipment includes a Revox B77 tapes, 1 record deck, 3 AKG D224E mics, 3 AKG D1200E mics, 3 mic floor stands, and 2 portable foldback speakers. Stage management desk will be by Showstrand, and incorporate paging and show relay, twin-ring intercom, cue lights and effects circuits.

## Turbosound in Australia

A.C.T. Jands Pty. Ltd., Australasia's largest sound reinforcement hire company, have recently taken delivery of 48 Turbosound TMS-3 Full-range enclosures, bringing their total stock to 72.

During the past year Jands have been very successfully operating their 24 cabinet TMS-3 System as well as their own manufactured Concord Speakers and the Clair 54 enclosures, say Turbosound. "Many International Artists who specify Turbosound regularly, and many local performers new to TMS-3's, have been able to reduce greatly their touring costs and handling times with the availability of the Turbosound System. This is especially true in Australia, where longer distances have to be covered and trucking costs must be kept to the minimum," said a company spokesman.

Dire Straits, renowned for their meticulous attitude to sound quality, will be the first artistes to use the newly enlarged System. John Newsham, Turbosound's systems engineer, will be travelling to Australia for the start of the tour in February to liaise with both Jands and Dire Straits, to ensure a smooth transition to the wider use of TMS-3's.

Alan Wick, Turbosound's managing director told L+S: "We are extremely pleased that Jands, having enjoyed such success with their initial System, should decide to extend their use of Turbosound to the largest Australasian tours. This has been made possible by their latest order which in turn has put us in a very strong position in the Australian market."

## DDA at Abbey Road

DDA have announced that they have received an order from Abbey Road Studios to supply a 16/8/2 D Series console fitted as an 8/8/2 using Theatre Input modules.

The console is for use in the film transfer room where it will be used to mix onto 35mm format music which has been previously recorded and partially mixed down in-house at Abbey Road or externally, or live music fed from other studios within the Abbey Road complex.

## The Formtronic Show

PLASA has a new member in Formtronic Limited, a three-man company based in Rochester, Kent. The directors are David Newnes, Roger Sullivan and Mark Botterhill.

It is difficult to describe Formtronic, who are based in an office which closely resembles a shop, with new and secondhand equipment for sale. From this base, there is also a thriving hire business, but it's often difficult to pin the lads down due to them charging about all over the country on club installation work. Therefore, it came as no surprise when last November, it was announced Formtronic were to stage a disco equipment exhibition, 'Southern Disco '85', with the accent on Mobile Disco.

As Roger carefully explained: "Most exhibitions consist of items which are way out of the budget of the average mobile DJ, the true backbone of the industry. 'Southern Disco '85' was designed to redress this deficiency by carefully selecting exhibitors whose products were of use to, and within the budget of, the mobile DJ." The gamble paid off, and being unable to wait until November next for 'Southern Disco '86', it was decided to hold a slightly smaller 'Mad March Sale' exhibition.

Amongst those exhibiting were:

**Scott Sound Systems**—a legend amongst speaker manufacturers, Glen Scott from Yorkshire displayed a complete range of what amounted to some of the finest speakers available to DJs. On public show for the first time, was the new bass bin. It was interesting to note that most of the other exhibitors used Scott speakers for their own sound checks.

**Any-Tronics**—demonstrated their two strobe units, the single-headed and the revolutionary twin-headed models. Operated by their switching panels, SP1200 and zoning panels, ZP1200, it also demonstrated their switching packs which will link up to virtually any system.

**Pro-Phase Ltd**—demonstrated a neat little console of a pair of the highly popular LAD turntables and Soundout Clubmaster mixer. Linked to a HIT Mosfet amp which incorporates a graphic and crossover, and a compact pair of speakers of a 1 x 15", 1 x 6" & horn.



The directors of Formtronic David Newnes, Roger Sullivan, and Mark Botterhill (first and second from left, and fourth from left) with telephonist Julie and exhibition compere Jim Lindsay (right) at their recent 'Mad March Sale' exhibition.

**ICE**—celebrating 15 years in the business and still showing why they are favourite amongst the mobiles. Nothing new, just the usual reliable, high quality Ice consoles.

**Sound Creations**—with a fine selection of inexpensive mixers, sound/light controllers and chasers.

**Light Engineering**—with a range of scanners, pinspots, par cans, and ropelights.

**South Eastern Discotheque Association**—rounding off the list of exhibitors, telling DJs of the benefits of belonging to an Association.

Although the visitor numbers were slightly down on November's exhibition, it was nevertheless a very successful day. Formtronic are now eagerly looking forward to the South Eastern

Disco Association exhibition, 'SEDA '86' to be held at the Woodville Halls, Gravesend, Kent on Sunday 8th June, and, of course, PLASA's own, the BIG one in September.

## Squire at Barnet

Squire Light and Sound have now moved their buying and administration department from offices over their North London shop to a new head office base at Knight House, 29/31 East Barnet Road, New Barnet, Herts. Telephone 01-449 5169.

The London shop address remains the same at 176 Junction Road N19 with further branches at Birmingham, Manchester and Glasgow.

## JIVE LIGHT EXCLUSIVE DISTRIBUTORS OF THE MULTILUZ RANGE



### LIGHT CURTAIN

Twelve PAR36 lamps on four circuits. Integral transformers separately fused. Designed to be used in multiples. Easy to fit filters. Rigid for a dead straight curtain of light. Splits into two for transportation.

Supplied in black or chrome

L78.75in (2m) x H4.33in (110mm) x 16kg W6in (1.15m)

Lamp Circuits:— 4 independent; Lamps 12 x 30W/6V PAR36

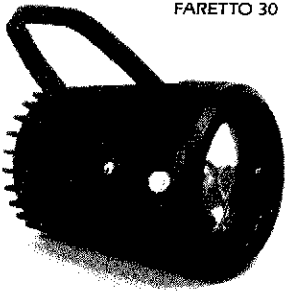
*Suppliers of the complete range of motorised lighting effects from the PINSPOT-to-the-"TRITON"*

**Send for new catalogue & price list from Dave Winfield:-  
Jive Light Ltd, 16-18 Greyhound Rd, London W6 8NX**

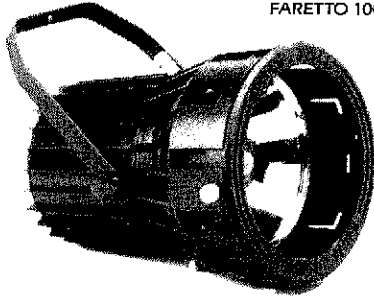
**Tel: 01-381 0868**

# coemar ...the pick of

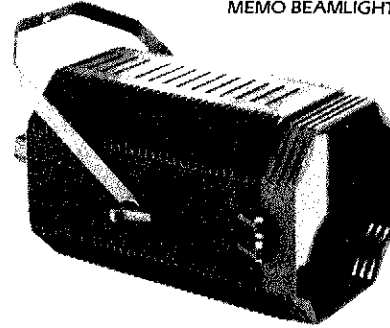
FARETTO 30



FARETTO 100



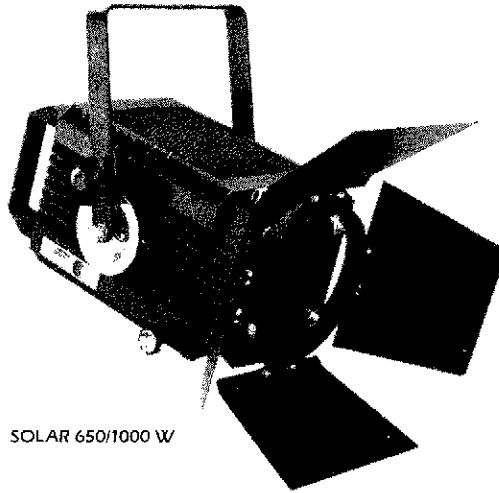
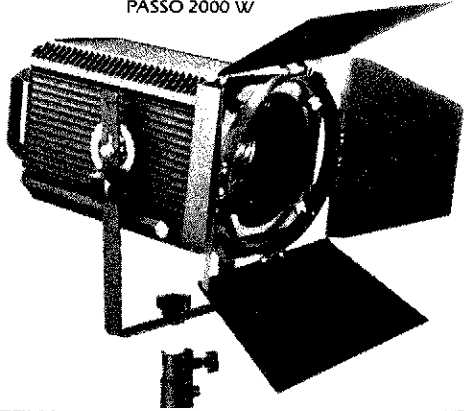
MEMO BEAMLIGHT



ANTARES BEAMLIGHT

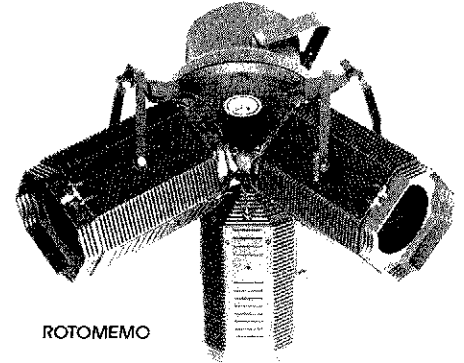
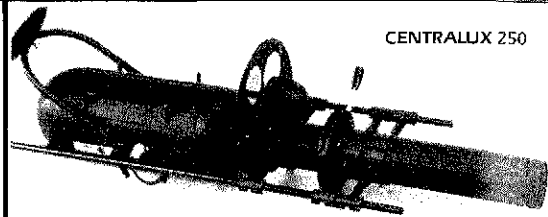


PASSO 2000 W



SOLAR 650/1000 W

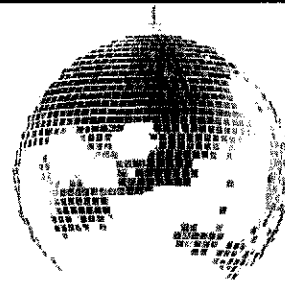
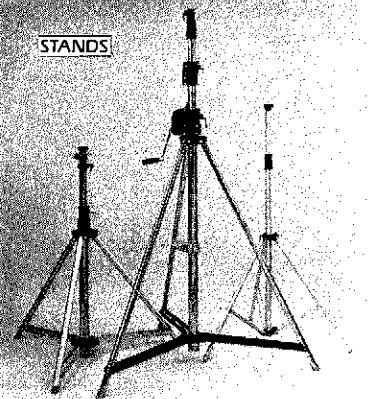
CENTRALIX 250



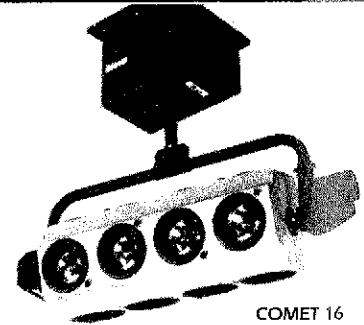
ROTOMEMO

CENSORED

STANDS

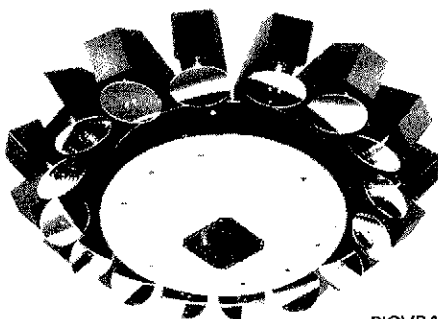


MIRROR BALLS

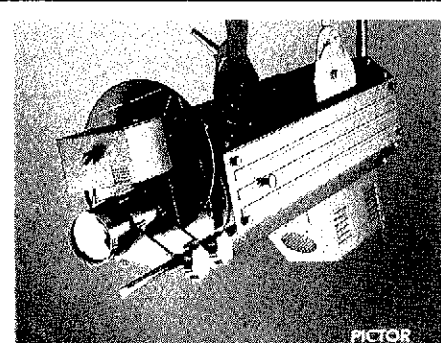


COMET 16

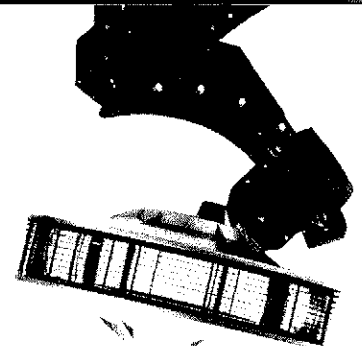
## EXCITING NEW EFFECTS FOR 1986



PIOVRA



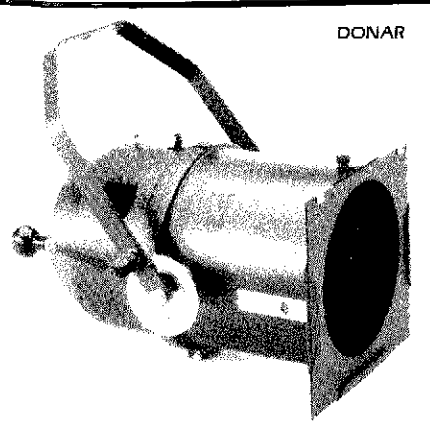
PICTOR



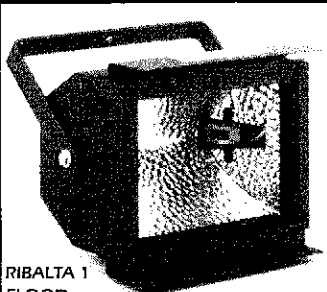
VENUS

TWO YEAR WARRANTY TWO YEAR WARRANTY

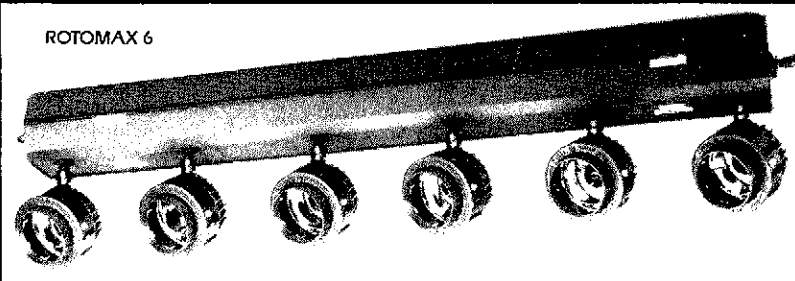
# this year's pin-ups



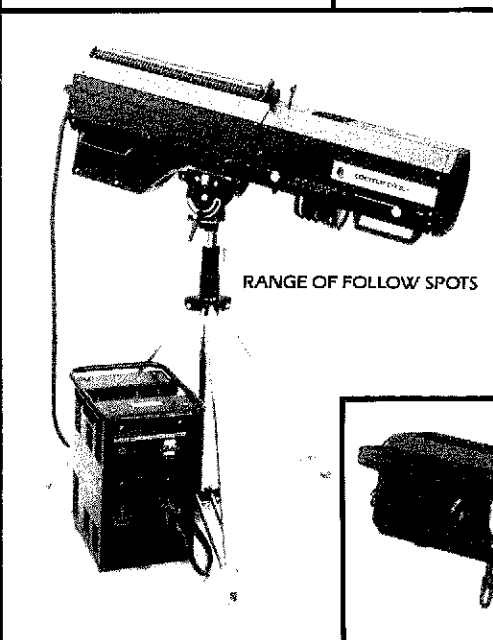
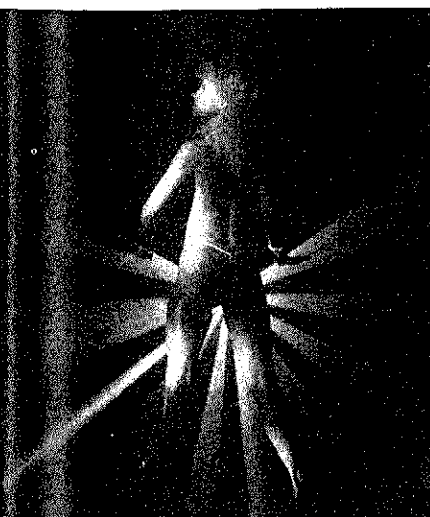
DONAR



RIBALTA 1 FLOOD



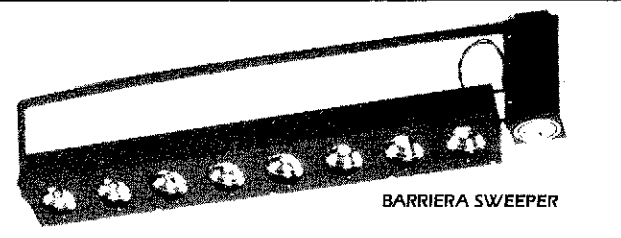
ROTOMAX 6



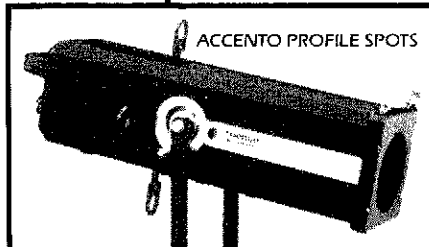
RANGE OF FOLLOW SPOTS



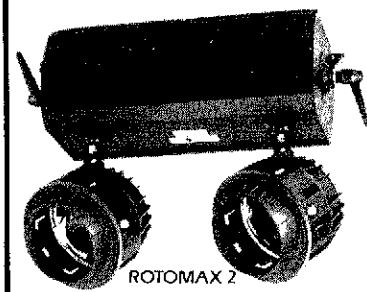
RIBALTA 6 FLOOD



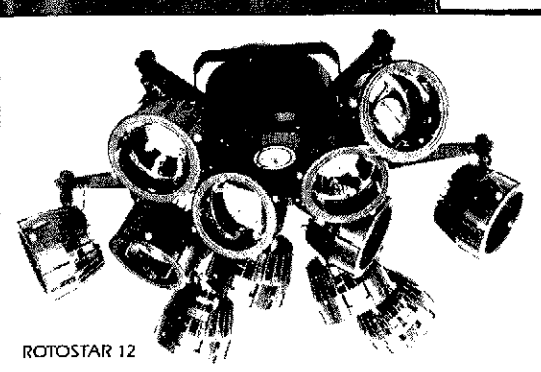
BARRIERA SWEEPER



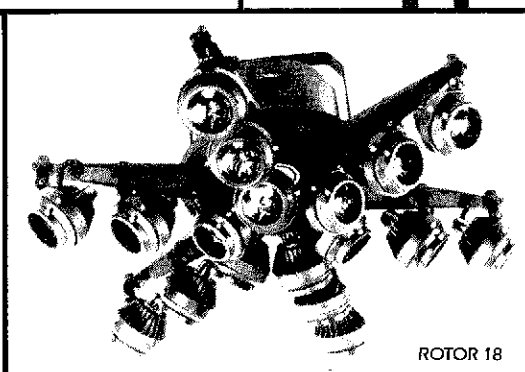
ACCENTO PROFILE SPOTS



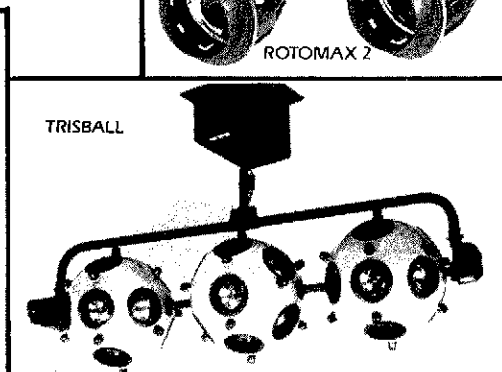
ROTOMAX 2



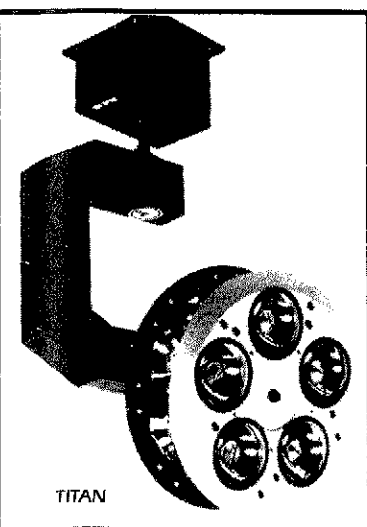
ROTOSTAR 12



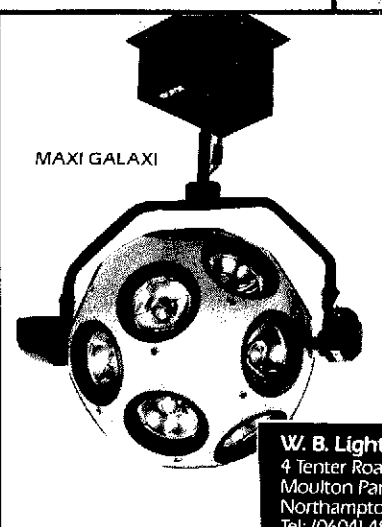
ROTOR 18



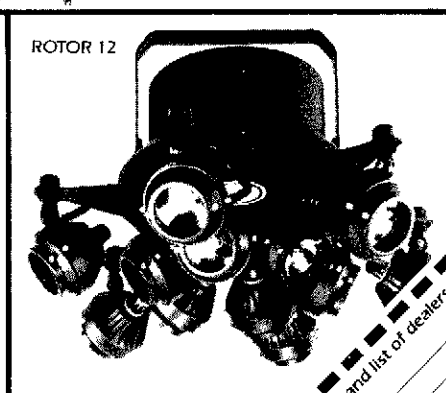
TRISBALL



TITAN



MAXI GALAXI



ROTOR 12

**W. B. Lighting Limited**

4 Tenter Road,  
Moulton Park Ind. Est.  
Northampton, NN3 1PZ.  
Tel: (0604) 499331

Italy  
Via Inghilterra,  
Castelgoffredo, 46042,  
Mantova, Italy.

**TWO YEAR WARRANTY**

Please send me details of your product range and list of dealers.

NAME \_\_\_\_\_ POSITION \_\_\_\_\_  
 COMPANY \_\_\_\_\_  
 ADDRESS \_\_\_\_\_  
 TEL \_\_\_\_\_

## Beau Sejour Modernised

Guernsey's only entertainment centre, the Beau Sejour, was recently refurbished, and a new sound system installed at a cost of £180,000.

The new look centre includes a 398 seat theatre and cinema, three lecture/conference halls; a banqueting hall accommodating 500 people; sports hall and 25 metre swimming pool, and means Guernsey can provide high quality facilities for business and social gatherings.

"With such a vast range of facilities it was imperative we installed a top quality sound system for public address use in the Centre," said Colin Bromley, the Centre's technical manager. Page One System Technology of Maidstone, a leading distributor of Toa Electronics Limited, was appointed to advise and assist on the installation of a sound system.

Chris Taylor, technical director of Page One System Technology told L+S: "Our brief was to provide the best in sound technology. More specifically the requirement was for a speech reinforcement theatre sound system and stage manager's communication and cueing system for the Beau Sejour Centre."

Page One's answer came in the form of three Toa 38-SD 3 way loudspeaker systems to be used in conjunction with the Theatre's newly installed acoustic suspended ceiling. To ensure high quality sound throughout the Theatre, the Toa system was located centrally over the stage, with each of the three speakers employed so they covered a 90° x 40° sector. The central loudspeaker was directed towards the rear of the auditorium and powered separately from the other two via a one-third octave graphic equaliser.

To complement the Toa 38-SD system, Toa's three-wire Constant Impedance Paging Priority System was used to support backstage listening and call paging. The system received its first public airing with the performance of a visiting London company's production of "You're A Good Man Charlie Brown".

## Turbosound Export Achievement

One of Italy's most important arenas, the 50,000 seat Udine Stadium in the North East of the country, has selected a British Turbosound system to replace their existing equipment. The original system had been supplied by an American manufacturer less than one year before, L+S was told. The contract was won, against fierce international competition, by Turbosound's Italian distributors, Audio Link of Milan.

A total of 18 TMS-4 enclosures are used in the system giving a power handling of approximately 9,000 Watts RMS.

The versatile TMS-4's have also been utilized in a leading Austrian venue, The Metropole, situated in the heart of Vienna. Among other recent international installations where British Turbosound enclosures have been selected are: Borsen, 1 2,000 capacity major night-club situated in Stockholm, Sweden; Dunk Island, a premier resort island located just off the Queensland Coast, Australia, and the Circus Building, used for theatre and cabaret productions, controlled by the Royal Theatre of Copenhagen, Denmark.

## Coals to Newcastle

Le Maitre, the Peterborough-based firework manufacturers responsible for last year's massive displays at Hyde Park and the Edinburgh Festival, have pulled off a major coup by landing an important order from Spain, home country of modern pyrotechnics.

It is a long-standing tradition for the inhabitants of Spanish villages to save collectively for the



Amark's five projector installation at Busby's, Charing Cross.

## Making their Mark

Amark are busily establishing a fast-growing reputation as a leader in the field of video projection systems. One of their latest installations was at Busby's at Charing Cross in London—a five-projector project that included many revolutionary features.

Other installations recently undertaken include systems at The Hippodrome, The Park in Kensington High Street, The Royal Oak at Hammersmith, Stargazers in Evesham, Chaplins in Warrington, The Alm Enfield, The Octagon at Bangor, and Central Park at Burton-on-Trent.

Amark are also pioneers in the laser disc concept and many up-market clubs are changing over whilst new ones are installing the new system from the word go.

In addition, the company is also branching out into other fields including the formation of a research and development department producing revolutionary video technology. They are also manufacturing video distribution amplifiers, video audio switching units and the long-awaited Laser Disc Mixer.

The company was formed just two years ago by Andrew Genko and Geraldine Clarke. It is based at Cheltenham in Gloucestershire.

whole year to put on lavish firework displays on their particular "Falias" or Saint's day, and such enormous consumption of fireworks has led Spain's pyrotechnics industry to become one of the largest in the world—second only to that of China.

Said Le Maitre's Martin Blake, acknowledged as being among Britain's greatest experts in the field of display fireworks: "It is a great tribute to the quality of British fireworks that we have been able to secure a very large order from Valencia-based Brunchi, one of Spain's leading companies in this field, for our unique gerbs and big whistles.

## Soundcraft plus AKG

AKG Acoustics, based in Munich, now have exclusive distribution rights for the entire range of Soundcraft products for the West German market.

They were first appointed towards the end of 1984 as dealers for the smaller Soundcraft products, up to and including the Series 800B. With the successful marketing of their given range, the reward has been this new distributorship which strengthens Soundcraft's position in Germany.

## People

Dynamic Technology Limited, lighting control specialists, have strengthened their technical sales team with the addition of sales engineer **Andy Cannon** who will specialise in broadcast products, and customer engineering manager **Frank Page** who will co-ordinate engineering on major projects. Cannon was previously with Marconi, and Page came from International Generics. They will be the front men in a high profile push by DTL

during 1986, including a new product launch at NAB.

Turbosound have appointed **David Bearman** as their UK sales manager. Most recently he was sales manager for Beam Electronics, and prior to that had pursued a career in the professional sound and lighting industry. Of prime importance for Bearman will be the extension of Turbosound's regional authorised dealer network so that all parts of the UK are fully covered.

Soundtracs have announced that **Simon Phillips** has joined their sales team. He joined the company from ITA where he worked on studio packages, and he also spent a period with Turnkey in London.

After sixteen years as managing director of Beyerdynamic, **Stan Duer** has retired. A popular man in the industry, his career spanned a full fifty years, most of which has been involved with the electronics industry. Replacing Stan is **John Midgley**, who as sales manager for the company is already well known to a large number of its customers.

Two new faces have joined the team at Entec Sound and Light. **Stuart St. John Miller** has a background as sound engineer in both theatre and conference work, whilst **Mark Brown** has joined the professional sound department to assist manager Spencer Brooks.

**Ken Barnsley** has joined AKG Acoustics as northern sales executive, and **Mike Gibson** has been promoted to southern area sales executive for the company. Mark originally joined AKG in April 1985 to set up the entire company warehousing operation at the new Godalming premises before moving into sales.

**Roger Ashcroft** of A & B Theatre Services is now in business on his own at 15 Thorne Road, Doncaster, specialising in hire and installation of lighting and effects including pyrotechnics.

# Theatrical Trading at the ABTT Trade Show

Jim Laws at Riverside

For the theatre industry, Hammersmith in March has become as de rigeur as Ascot in June to the grey-topped fraternity. The ABTT is currently taking prudent action to combat the lunatic Arts Council grant withdrawal and so Theatrical Trading Ltd. was created to mount this profit-making enterprise. Perhaps they should also launch Theatrical Beviies Ltd. and commandeer the refreshment facilities at the Riverside Studios—the new caterers must have cleaned up, despite spurning proffered beer mats.

What of the exhibits on display? Harrogate's Bill Graham's general impression was of "a year of refinement rather than amazing innovation in the theatre industry". And perhaps the most innovative stand was in tucked-away Studio 3, where **MS Audiotron** of Helsinki showed their Microcomputer controlled Audio System and Multimix audio console, with the ability to co-ordinate many sources to create moving images of sound. However the fact that **Slick Systems** won the Product of the Year Award with their two tonne 620 square deflection resistant truss is perhaps a fair assessment of the relative usefulness of the two diverse technologies.

It is always a healthy sign to see a number of first-time stands. On the sound side **Canford Audio**, ABTT regulars now with sound mixers for sale and hire, were joined this year by **Cable Technology Ltd.** whose range of cables, connectors and coiling drums will now be better known by the industry. Com-



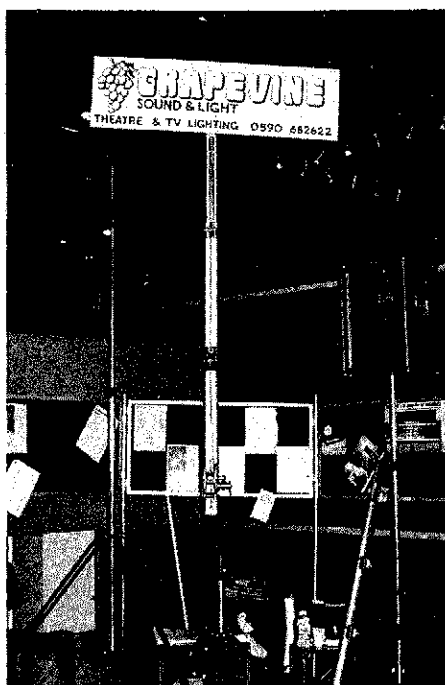
Regular re-union: grand old man of the ABTT and Rank Strand Fred Bentham (left) with Strand's sales manager Ivan Myles (right) and technical sales representative Brian Myers. Brian's first stint at Rank was at the age of 17 when he joined the operation at King Street in Covent Garden in the middle of Fred Bentham's long reign as technical director for the company.

panies offering sound mixers included **Surrey Pro-Audio Centre** with the Studiomaster series, and **Music Lab** of London NW1 whose speaker types include the familiar name of Bose, as well as the intriguing RED Acoustics range which is "psycho-acoustically conceived".

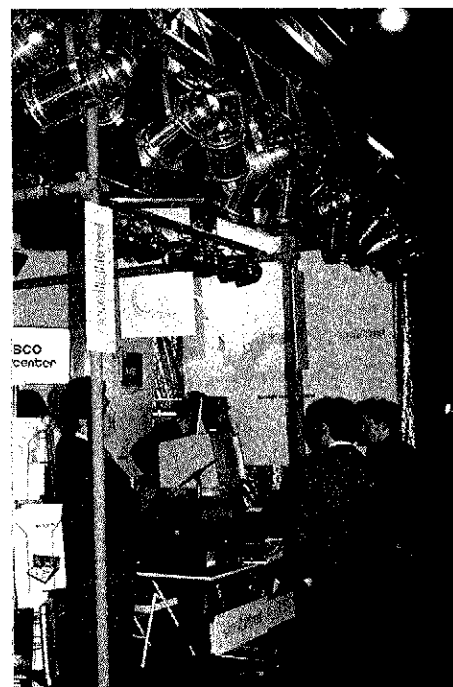
**Spectrum Audio Ltd.** returned to Hammersmith full of the joys of winning the contract for the Hong Kong and Shanghai Bank Boardroom PA system with voice-activated microphones. In their second visit to W6, **Sennheiser** represented by John Wheeler and Bob Thomas of Hayden Laboratories Ltd. were exploring the potentially lucrative market of infra-red transposition for the hard of hearing. **Technical Projects Ltd.**'s stand was showing the new MS 731 loudspeaker Master Station, two-circuit belt packs, and four-circuit Master Stations. Their stand was hooked up to several stockists for long distance headset demonstrations.

In a year when some of the largest names in the London hire market chose not to take a stall but to maintain a presence on manufacturers' stands, it was pleasing to see several smaller companies taking the trouble (and spending the money) to meet old friends and new clients. **Trafalgar Lighting**, proud possessors of a D.T.L. 36 way 3 preset/9 group desk, **Grapevine Sound** and

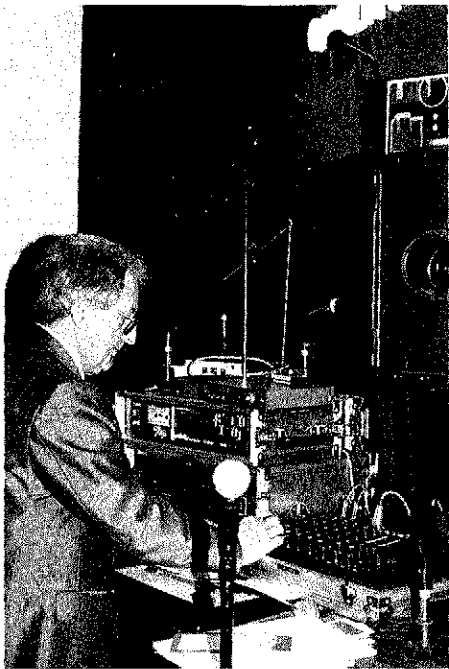
**Light** of Lymington, distributors of Mercury stands, and **S.M.L. Audio Visual** of Southend-on-Sea, very strong on PA and lighting



Grapevine's display with their range of Mercury stands.



Part of the busy Eurolight MSL stand.



Playlight's Ron Lamb—non-repetitive music from an impressively neat system. Their theatrical pyrotechnics range was also on show.

system packages, all found the trade show very aptly named.

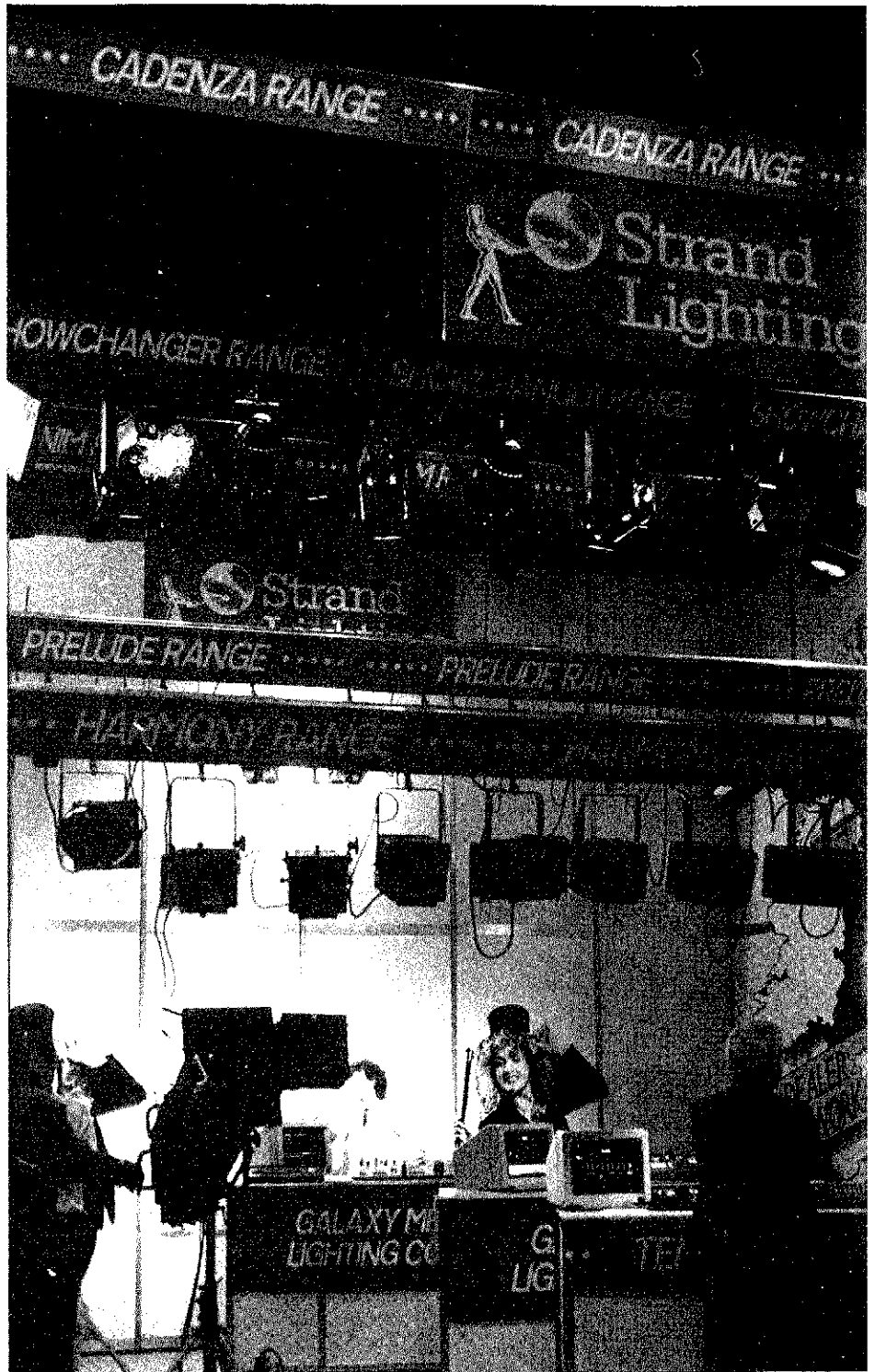
Amongst the regular stall-holders dealing in lighting from the provinces, **Lancelyn Lighting** laid emphasis this year on their new range of Oxford curtain tracks and Formis injection mouldings. It was the perceptive Mike Sweetland who named this "the year of the tabtrack and noisy spinning luminaires", but **Ancient Lights'** sedate contribution to the melce was a 40-year old Spectrola, beneath which Peter Nesbitt clinched the first U.K. installation of the Celco Series 2 gold 90 way control board . . . to Thursford Organ Museum.

**Raxcrest Electrical's** Ken Wirdnam noticed great interest in his internally-wired bars and CCT Lightline coloured track-mounted lighting, whilst next door **Northern Light** laid emphasis on their patch panels and custom-made distribution.

Speaking of Celco, whose controls were given pride of place on the **Cerebrum** stand along with the Powerdrive stand range, their new series 2 dimmers complete the upgrading of the whole Celco system. Opposite them with the Stand of the Year Award were **Avolites** whose 90/180 way QM 500 desk features the thumbwheel edit and menu-driven programming/function facility. The third contender in the "two presets and everything" stakes was **Zero 88**, whose touring Eclipse system is modular. Their continued interest in the smaller user was shown with the Mercury range of Club/Disco dimmer systems with Delta dimmer packs.

**Pulsar's** Derek Saunders commented that there was more interest shown this year in their B.B.C. micro interface 36 way memory system, with the 18 and 36 way matrix Rockboard also on display. **Eurolight MSL**, newly established in Mercer Street, WC2 as a "One Stop Theatre Shop", were showing the Concord controls range and new Micropack dimmers driving Microlights low voltage display spots.

The mark of a busy stand is that you can't



Strand Lighting's giant Trilite stand complete with Showchangers.

find any of a large sales staff who are free to answer your questions, and that was certainly true of **Strand Lighting** throughout the three days of the show. I thought this stand was unlucky not to have received an award—especially as the said salesman were seen taking its gigantic Trilite structure apart again on Saturday. A fair number of the "noisy spinning luminaires" commented on earlier were Showchanger par cans from Strand Century, complete with colourscroll changers. Personally, I think that anyone who can afford a few of these will also be able to afford 3000 watts of power to drown the inevitable electro-mechanics, and that it is good to see them marketed sensibly, and to read that the range is to be greatly extended.

Meanwhile, in the white corner, **CCT Theatre Lighting** also had a projection surface, albeit across a gangway, on which to demonstrate the added precision of the condenser lensed Minuette profile and flight cases sized 1Kw gobo profile. The familiar Silhouette has acquired yet another increase in light output through a new reflector, and the Minuette Flood has been completely redesigned to take safety glass and/or mesh in a boxier lamphouse with self-eject cable. The familiar face of Don Hindle was missing as he was covering U.S.I.T.T. in California. Why do dates clash so often?

Time was when CCT and **A.D.B.** were working together. Now with their own stand this Belgian firm exhibited the SM22 and the SM26 manual controllers and the SM28



memory desk as well as their complete range of luminaires. The most interesting of these was the Svoboda HT 2251 light screen, using 9 x 250 watt 24 volt lamps as previously seen in the old Reich and Vogel beamlights. Slightly overrun at 240 volts, the intensity of light curtain was stunning.

Roman Walenta of **Coemar/Desisti** (W.B. Group) had the bright idea of inviting a number of T.V. lighting directors to the trade show and perhaps this contributed to the overall impression of quality, if not quantity, of visitors. Certainly I noticed a number of T.V. lighting men, and interest in the Desisti range was tremendous. My favourite, however, was the Coemar Antares 2 Kw searchlight—expensive but unique.

Further into the realms of T.V./Film lighting, **Cinebuild** was showing the French LTM range which is available to hire. The E.N.G. kits were photographed posed outside the boot of the inevitable Citroen estate, but the LTM10K was there in the flesh, along with a range of effects machines. Other imports were featured by **A.J.S. London Theatre Centre** whose Phoebus Followspots include the well known Ultra Arc range. The Ultra Quartz is a very high quality dimmable spot using a 360 watt lamp. **Playlight Hire Ltd.** were showing the Theatrical Pyrotechnics range for which they are main dealers, and their sound hire and sales capability was shown with some very tasteful and non-repetitive music from an impressively neat system.

There was a trend towards stand share this

year, Peter Moore of D.E.W. with Coemar/Desisti and Slick Systems with Northern Light for instance. Ancient Lights, Raxcrest and Suffolk Scenery were full of collective Eastern Promise but the record for combination must go to **Pancan, Touchstone, Laser Creations** and **Andromeda** who between them can pivot light via the Pancan Series 3, control it via the Pancan Touchstone (96 channels, 99 presets), laser it as in Reckitt and Colman's recent launch, and tour it with enhanced targetting. In such an expensive realm of R.&D. this pooling of skills must make good sense.

Meanwhile **Lightworks Ltd.** operate a stand alone policy and are quietly getting on with the business of marketing a standard yoke for luminaire remote control, and they were showing a prototype 10 colour cassette for cyclorama work. The 2K CCT Barndoor Control was particularly neat and was first used at the DeMontfort Hall, Leicester.

**Rosco** is one company guaranteed to have new products each year, in this case the Pro 1000 Fog Machine with external fluid bottle and self-pressure, a unique 6 ft wide dance floor, and new colours to the Supergel and fluorescent paint range. Stands near to Rosco tended to go strawberry flavoured as this was the fog fluid in vogue for demonstration. M.D. Michael Hall was "greatly pleased with the space between stands, and the calibre of the visitors appears to be higher."

**D.H.A. Lighting Ltd.** were showing their new lighting box using controlled strobing and a fibre optics starcloth which is hireable.

Their range of gobos has increased greatly since last year with further progress in glass based designs.


But what of the lamp stockists, without whom we would still be going to Verities for our gas mantles? Each had something special. **Valiant Specialist Lighting Division** simply claimed the widest range of theatre, studio and projection lamps in the U.K., **Specialist Lamp Distributors** showed a wide range of spare parts, flickering candles and micro festoons. Their 20K B.T.H. Mazda lamp was certainly the largest single bulb!

It was a busy show, but how did people find it? Tony Neale of Cinebuild liked the format of the informal exhibiting: "technicians and impresarios of the future can mingle and feel at home". Mark C. Morley of A.J.S. noticed the lack of make-up, prop. and design visitors and the lack of stalls for them to look at. On the subject of stay-away stand-holders one comment from someone with a large stand was "it all depends on whether we can afford to subsidise ABTT to this level as to whether we have such a good stand next year."

My view is that for this one event all technical theatre should pull together, and that if we do it would be realistic to lower the price per stand. The ABTT is too important to have an insecure future. In such a widespread industry as the theatre its information service alone is worth supporting. Long may Theatrical Trading Ltd. flourish!

**Note:** Lighting and Sound International had a stand too! (Ed.)

# WHEN IT COMES TO



SMALLER • LIGHTER • BRIGHTER

PROJECT  
OUR LATEST HIT AT  
THE RIGHT PRICE

The best thing  
to happen to  
ROCK & POP  
Lighting

1000W ZOOM OR PRESET BEAM ANGLES  
ADJUSTABLE FIELD • SUPERB GOBO PROJECTION

CCT

theatre lighting

WINDSOR HOUSE 26 WILLOW LANE MITCHAM SURREY CR4 4NA  
Tel: 01-640 3366 Telex: 946648

PLEASE SEND DETAILS OF PROJECT

NAME: \_\_\_\_\_

POSITION: \_\_\_\_\_

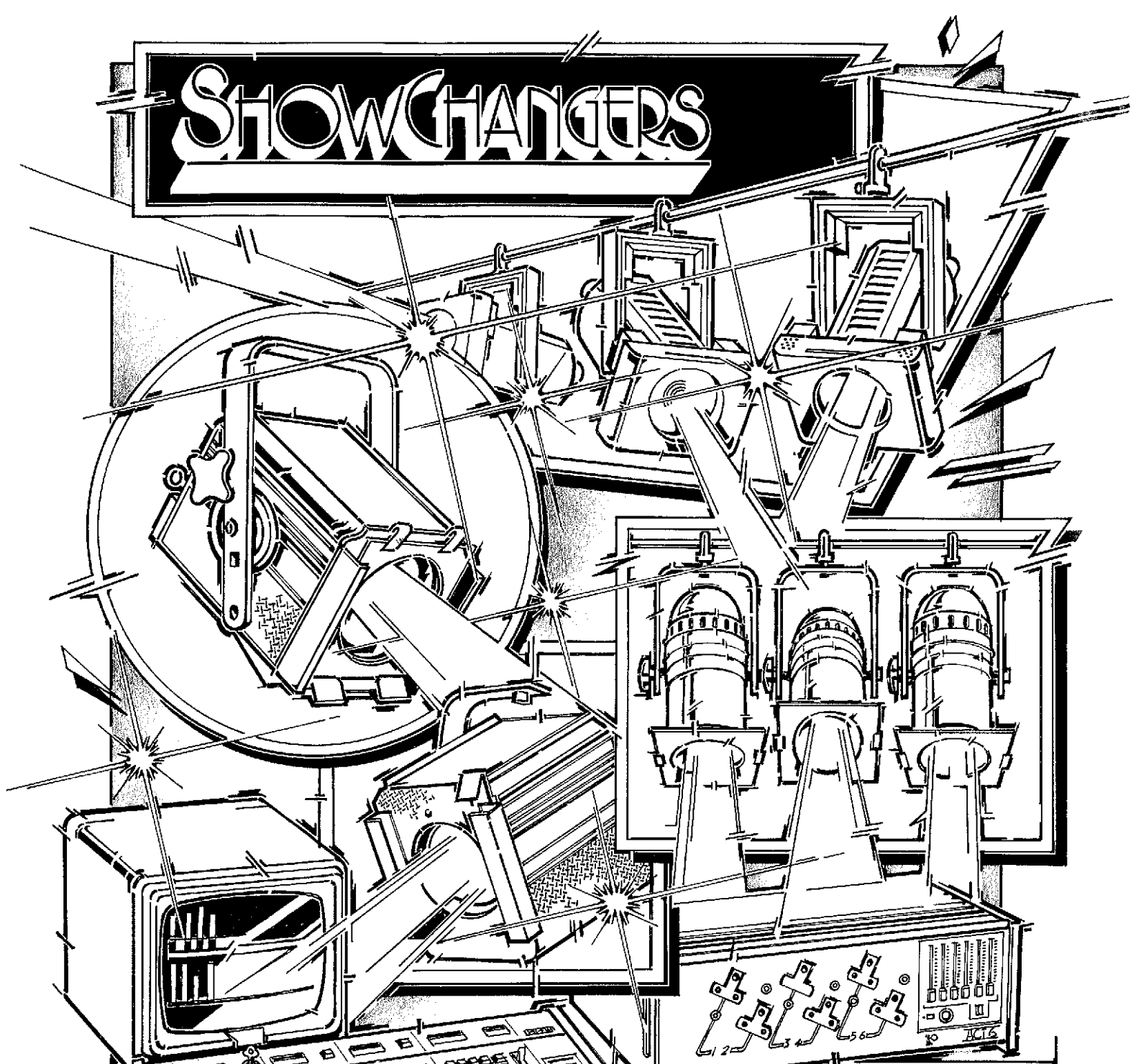
COMPANY: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

TEL: \_\_\_\_\_

CCT Theatre Lighting, 26 Willow Lane, Mitcham, Surrey, CR4 4NA

# SHOWCHANGERS



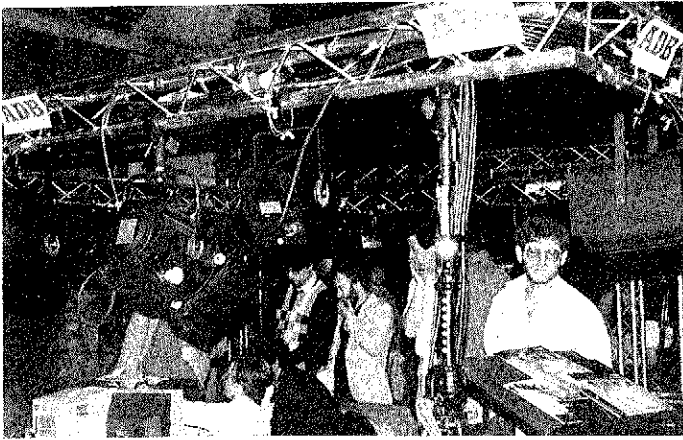
## LIGHTSHOW LEADERS FOR 70 YEARS!

When it comes to lighting and effects for entertainment, no-one knows more than Strand, industry leaders and innovators. Strand systems are installed worldwide in leisure complexes, discos and clubs, as well as in TV, film and video studios.

In the extensive Strand range of Minim, Prelude, Harmony and Cadenza luminaires with power ratings from 300W through to 2000W, there are Fresnel, Prism Convex and Profile spots, complemented by Nocturne/Coda floods, Solo followspots and a range of sophisticated lighting controls – in fact an answer to every entertainment need, **plus SHOWCHANGERS**, the designer-controlled system with automated pan and tilt and integral colour changer.

 Strand Lighting

Rank Strand Limited, PO Box 51, Great West Road, Brentford, Middlesex TW8 9HR. Telephone 01-568 9222, Telex 27976.



ADB of Belgium were showing their controllers and complete range of luminaires.



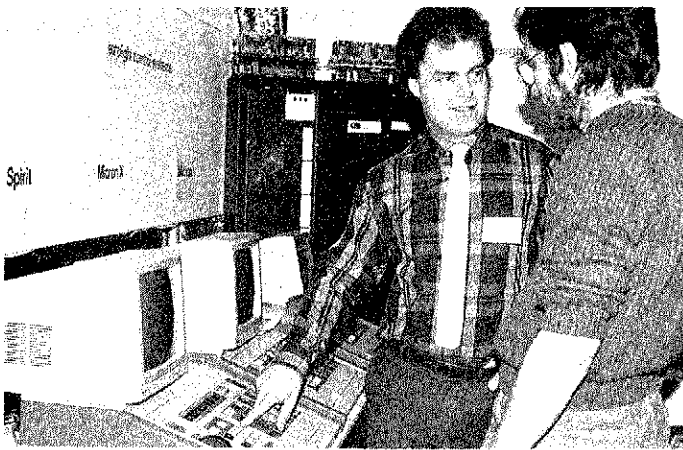
Action Lighting's Jack Exell (left)—showing a wide range of spare parts, flickering candles, and micro festoons.



Valiant's Ken Brown (right)—claiming the widest range of theatre, studio and projection lamps in the UK.



Ancient Lights' Jim Laws (right) was L+SI's correspondent for this year's ABTT Trade Show. The lower part his 40-year old Spectrola can just be seen at the top left of the photograph.



Nick Mobsby of Eurolight MSL explains the features of the 'Spirit', a low-cost controller for the education market.



Technical Projects Limited were hooked up to several stockists for long distance headset demonstrations.



Roman Walanta (right) of the W.B. Group (Coemar/Desisti) invited many TV lighting designers to the Show.



Cerebrum's Colin Whittaker (right) with Tony Cochrane, national marketing director for Jands CCT, Australia.

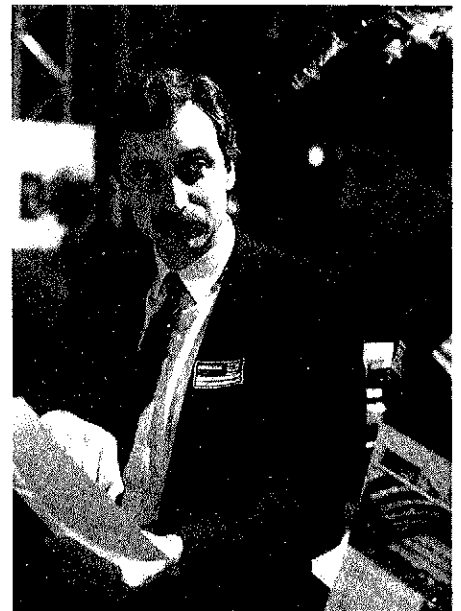
tre Flooring



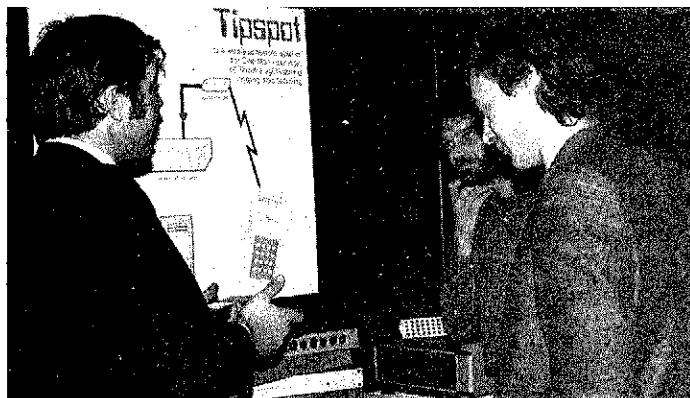
Peter Roberts gives non-stop information on Pan-can and Touchstone.



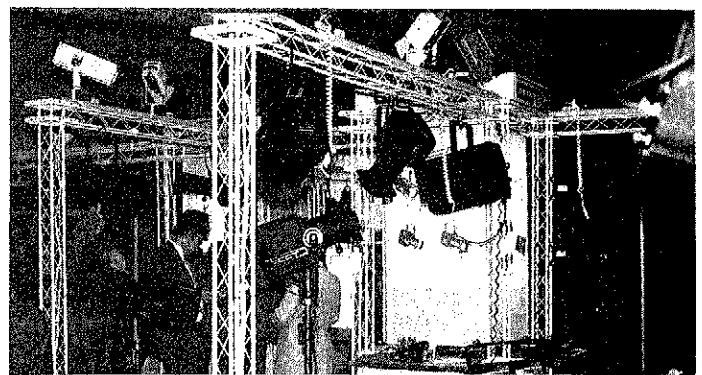
Rosco—guaranteed to have new products each year.



Northern Lights' Jonathan Allen—patch panels and custom-made distribution.



Spectrum Audio's Vic Dobbs (left) with the ever popular Tipspot.



In the white corner . . . the CCT Theatre Lighting stand. A new range of Minuette Floods was launched at the Show.



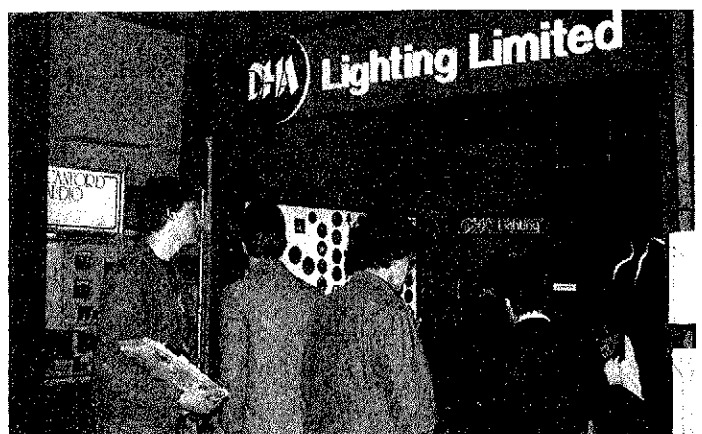
The Ancient Lights stand, with a better view of the Spectrola.



Graham Witcomb of Optikinetics (left) with Adrian Sant of A.J.S. Trilite and the Ultra Arc range probably came up somewhere in the conversation.



Graham Walne and Lynton Black of Leisureplan talk Microlights with Graham Bowen, managing director of Eurolight MSL (left).



DHA Lighting—further progress in glass-based gobos.



Facade of the Wakefield Theatre Royal and Opera House showing the new canopy, restored brickwork, and the corner shop currently undergoing conversion to become "Mr. Matcham's" coffee bar.

## The Two Matcham's

### Wakefield Theatre Royal and Opera House

Renovating any old theatre creates problems of balancing the needs of modern technology with the aesthetic requirements of the building and, within any listed building the demands of the planning authorities have also to be considered.

The restoration of the Wakefield Opera House by the Wakefield Theatre Trust has been master-minded by the Trust chairman, Rodney Walker and I.A.C.P. architect Joe Parker. For Rodney Walker the battle to return the Opera House to live theatre again began over a decade ago and Joe Parker has been associated with the project since late 1982. The end-product of their endeavours is a very pretty and theatrical auditorium which has been beautifully restored to its 1894 state, but with a capacity reduced to 528 (242 stalls; 146 dress circle and boxes; 138 gallery). This makes it the smallest existing theatre designed by the great Victorian theatre architect Frank Matcham. It is a theatre with two balconies and the back of the stalls is a mere 45 feet from the front of the stage—making the immediacy and intimacy of the relationship between performer and audience particularly marked.

Exciting Rococo plasterwork on the circle fronts by de Jong's is a special feature of the Opera House and the clean lines of the circles need to be maintained. The panels of the lower circle had lost their original decoration and in my opinion the replace-

Two of renowned theatre architect Frank Matcham's more intimate theatres reopened their doors in March after refurbishment. Cheltenham's Everyman Theatre started life again on March 20 with a performance of 'My Fair Lady' after a short four year closure, and Wakefield's Theatre Royal and Opera House had its gala reopening night on March 16. The latter has cost £750,000 to restore, and was last used as a theatre over 30 years ago. It was purchased by a Trust from Ladbroke's in 1981 for the sum of £20,000.

Michael Sell looks at the Wakefield Theatre Royal and Opera House, and John Offord studies the background to the Cheltenham Everyman revival.

ment is not up to the quality of the rest.

The theatre has installed a Rank Strand Gemini board (with effects option) operating 108 circuits, twelve of which are 5k, the other ninety-six being 2k. Generally the theatre has standardised on the Harmony range of lanterns including 4 Profiles, 24 Fresnels and 30 others of varying design and capacity. In addition there is a clutch of ancient lanterns dating from the pre-1955 period when the theatre was last used for live shows. In the immediate future it is the intention to hire additional equipment as and when it is needed.

The control box is situated at the rear of the gallery and will probably house follow

spots although an ugly concrete slab at the front of the gallery left over from cinema days is also a possible site for them. Currently the lanterns tend to be fixed in obtrusive, eye-catching places with one group slung under the gallery and above the heads of the most expensive seats in the dress circle. Other banks of lanterns are to be found in the gallery slips where they not only take up potentially valuable seating but catch the eye—whereas an equally good angle might be obtained from a wall mounting. It is suggested that other lanterns in the gallery might eventually be mounted on the top of the control box.

If a great deal of emphasis appears to be placed upon the aesthetic environment of the gallery it is because in this theatre it accounts for a significant proportion of the limited capacity, and artistic director Graham D'Albert is aware that the best the theatre can only hope to break even in presenting a mixed programme of touring companies, one-night stands, community based and amateur productions.

He is aware of the upsurge of pride in the building and that it has to be made attractive to theatregoers from the surrounding area; not attempting to compete with the Leeds Grand and Bradford Alhambra, but providing alternative fare.

Difficulties in creating product will be formidable with no workshop space and limited wings of only 5' stage left and 12' stage right. Reusing the original grid the stage has a twenty line double purchase counterweight

system purchased from the ABC Blackpool and renovated and installed by A.S. Green of Haydock.

Mike Boyd has been appointed technical manager of the Opera House after six years at the Milton Keynes Leisure Centre. To him falls the task of commissioning the theatre, aided by a team of volunteers. Already he has discovered some strange installations. The stage manager's Showstrand desk has been wired in a way that he will certainly wish to alter and the dressing room show relay loudspeakers are of a quality and capacity totally out of keeping with the requirements and possibly more appropriate as Christmas presents!

To date, that is the extent of any sound system. Admittedly the theatre's acoustics are perfect and the small volume of the auditorium means that amplification should not be necessary—yet the theatre will open without even a tape or record deck or house loudspeakers for sound effects and incidental music. Partly this is because of finance, and partly because no decision has yet been made on which would be the most suitable system. This means that a total wiring job still has to be undertaken for the sound provision, and although only a subtle system is envisaged it is to be hoped that it is both acoustically and visually acceptable.



Gala night audience at the Wakefield Theatre Royal and Opera House. Lighting positions below the upper circle and in the gallery slips are very apparent.

Meantime there is still a need to purchase basic equipment, like ladders, to make the Opera House a working instrument. It has the potential and character to provide an outstanding centre for the community and

will surely be visited by many who are interested in theatre. The Opera House held an initial gala on March 16th but commences full operation on April 14.

Michael Sell.

## Cheltenham Everyman

Built as The Opera House in 1891 by Frank Matcham, the venue was renamed Everyman in 1960 when the Everyman Theatre Company was granted leasehold occupation of the building following a brief period of municipal management.

The theatre re-opened on March 20 after undergoing an extensive redevelopment programme financed mainly as the result of an agreement between the Borough Council and Cruden Developments, the developers of the Regent Arcade, which released funds for the theatre's development.

Further support came from the Arts Council's Housing the Arts Fund and also from the theatre's own Development Trust, an independent body set up initially to raise further funds for the redevelopment, and which will continue to provide capital support for future needs.

With a seating of 670 spread across 3 levels, no one is far from the action on stage, and is with all Matcham buildings, there have been plenty of architectural features to embellish. A new studio theatre has been built within the new complex, which can seat up to 80 depending on the format.

Front of house lighting positions include a bar at the rear of the main ceiling, above the gallery, and bars either side of the upper circle sides. Circuits are also available in the boxes, and the front of the dress circle. The previous positions on the upper circle front have been removed. Stage lighting control is normally located in the control room at the rear of the dress circle, but this can also be positioned in the stage right auditorium box. Control is by a Strand Gemini board with 120 channels, and the dimmers are Rank Strand Permus, 100 2.5k and 20 5k.

Sound control is from the same control room, but the mixer can be plugged into an



John Doyle, artistic director and chief executive, pictured inside the newly refurbished auditorium of the Cheltenham Everyman Theatre.

outlet in the stage left auditorium box. There are 3 pairs of Tannoy Puma speakers in the auditorium, and any loudspeaker circuit may be selected to any output group. There are 18 microphone lines.

The stage manager's desk may be plugged into sockets located downstage left, downstage right, or centre stalls, and communications include twin ring intercom, talkback to eight outstations, and cue lights to nineteen locations. There are calls and show relay to dressing rooms and other backstage areas. Wiring has been provided for CCIV, and an inductive loop aerial has been provided for the hard of hearing.

The management are determined to find a programme format that will appeal to as

wide an audience as possible, and for this reason consider the coming months as experimental, presenting a broad mix of Sunday concerts and children's shows in addition to their home-produced repertory fare. Artistic director is John Doyle, and he combines this post with being chief executive. A Scott in his mid-thirties, he has worked in many Scottish theatres but was most recently director of the Swan Theatre in nearby Worcester. Technical manager is Roger Hendry.

Theatre Consultants for the project were Carr and Angier, and sound and communications installation work was carried out CTL (Control Technology) Limited.

John Offord

# Opera-Bastille

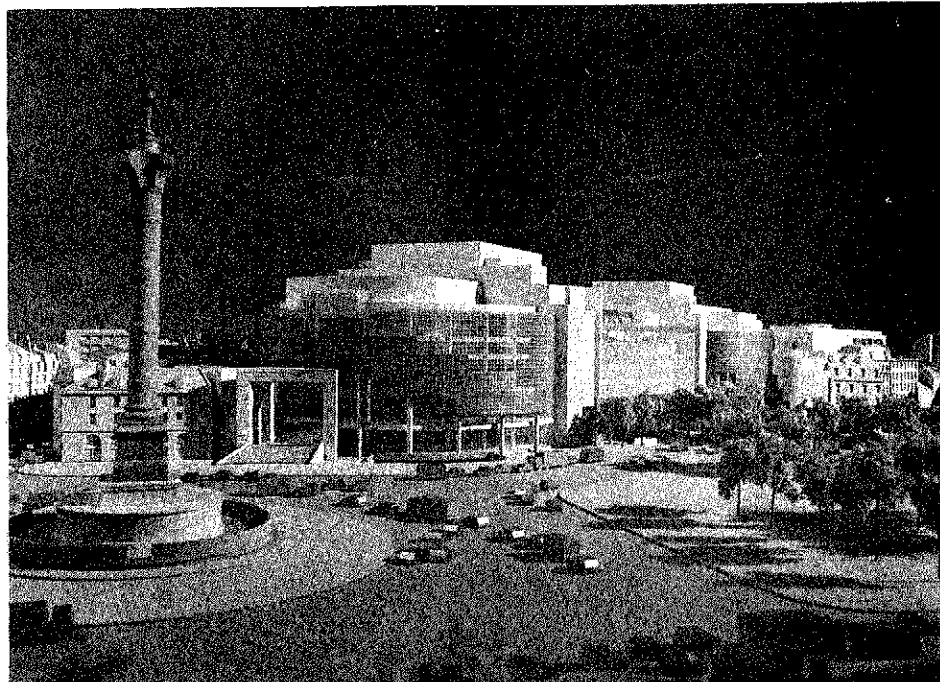
## A new centre for the East of Paris

Alight from the Paris Metro at the Bastille, and the place that conjures up so much in the imagination leaves a lot to be desired in aesthetic terms today. Until 1989, that is, when the latest in the regular line of French architectural grand gestures is inaugurated at the Place de la Bastille on July 14th to coincide with the bicentennial of the French Revolution.

The building site for the Bastille Opera was opened in July 1984 with demolition and the laying of foundations, and the construction stage has now begun with the complex due for a phased opening from 1987 onwards. Located at a key position in the East of Paris, the Place de la Bastille has no existing monument that could be said to meet the expectations of the thousands of visitors attracted to the site because of its universal symbolism. Now, this part of the City will be provided with a public building which it lacked—a new and revolutionary opera house.

The architect, Carlos Ott, was appointed as a result of an international competition which attracted 750 projects. The function of each individual area in the complex can be readily identified by simple volumetric forms creating a morphology in which space is allocated in a way that is rational and distinct. The public parts in the front are complemented by a zone surrounding the main and modular auditoria—an area given over entirely to the artistry and preparation of performances, dressing rooms, rehearsal rooms, and so on. Another area, that communicates with the first two sectors, has been set aside for set building, costume, stage and property design. The public entrance itself makes the most of the traditional grand staircase, and at the Bastille Opera it comes right down to the street from the "auditorium arch" entrance.

The main auditorium will seat 2,700, and it will be able to stage the entire traditional and modern operatic repertory. There will also be a modular auditorium seating 600 to



The Opera Bastille will transform the Place de la Bastille and provide the East of Paris with a major public building that it badly needs.

1,300 which by its flexibility will enable the creation of new works and productions. In addition, there will be a small amphitheatre seating 500, a studio seating 280, and around 4,500 square metres of rehearsal space. The public areas will be open all day and include exhibitions, shows, information points and all the usual complementary activity to the current main performances.

One of the main reasons for building a modern Opera House in Paris, both from an artistic and economic point of view, is not only to answer cultural needs which could no longer be satisfied by the present Opera House, but to open the doors to a much wider public. At the Bastille Opera, it is estimated that the audience figures can be tripled.

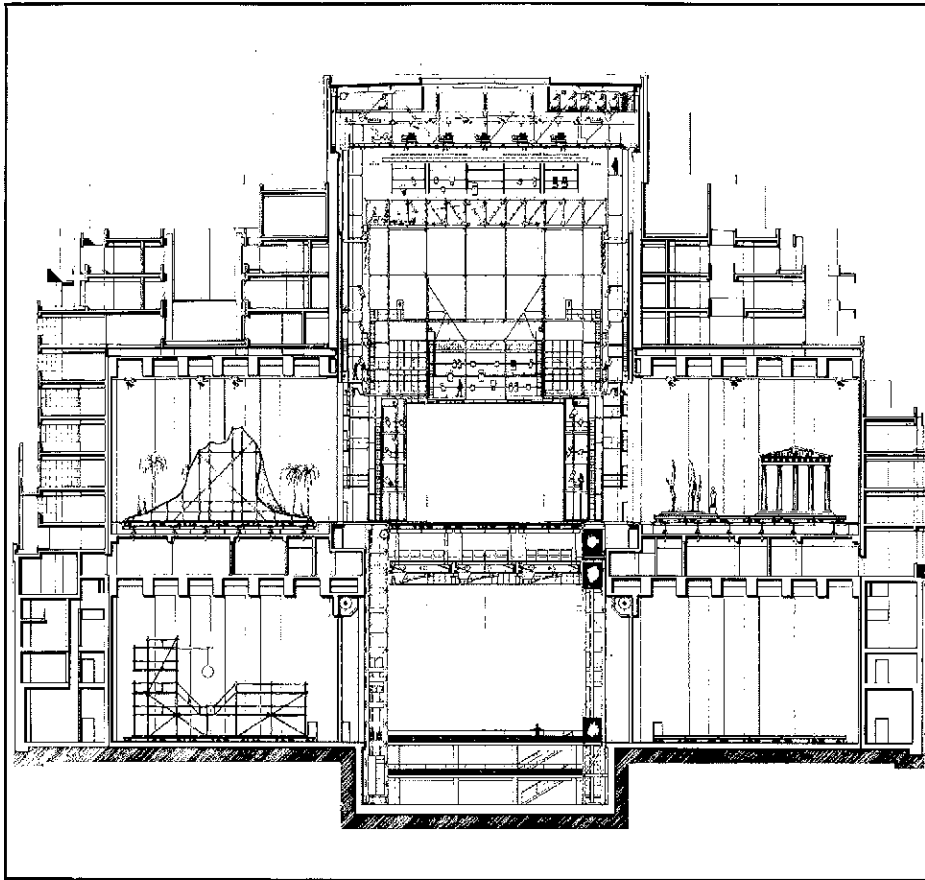
Additionally, the very nature of opera performances has changed, and the spirit of an opera house and its social role have been very much modified over recent years. The whole approach to operatic production has altered, with broadcasting and televising of performances, and the new opera-going public is younger, enthusiastic, and more amateur than expert say the French authorities—with opera now more of a love than a passion. The cultural breadth has widened, and the "new public" sees opera as just one of many types of live performance.

At the same time, works produced in the world of lyrical fantasy have developed. Monumental stage sets, both traditional and modern, and costumes and lighting nearing perfection have all contributed to make live performances of operatic works attain new dimensions. Both the modular and the main auditoria of the Bastille Opera will allow for the evolution of modernity in lyrical works, without diminishing the value of the vast classical repertory.

As far as the modern perspective is concerned, the endeavour will be to bring a new approach to the reading of the repertory as well as the discovery of new works, and all the latest facilities to aid this are incorporated within the complex. It involves providing not only producers and dramatists, but composers and conductors as well with all the means of practising their art without restriction. And it also involves promoting simultaneous research so that the opera develops into something more than just a concert "enhanced by lighting effects"—according to the official policy statements.



The main entrance on the Place de la Bastille with the grand staircase running down the street, and the proscenium arch effects.



A vertical cross-section of the back of the stage from the main auditorium, Opera Bastille.

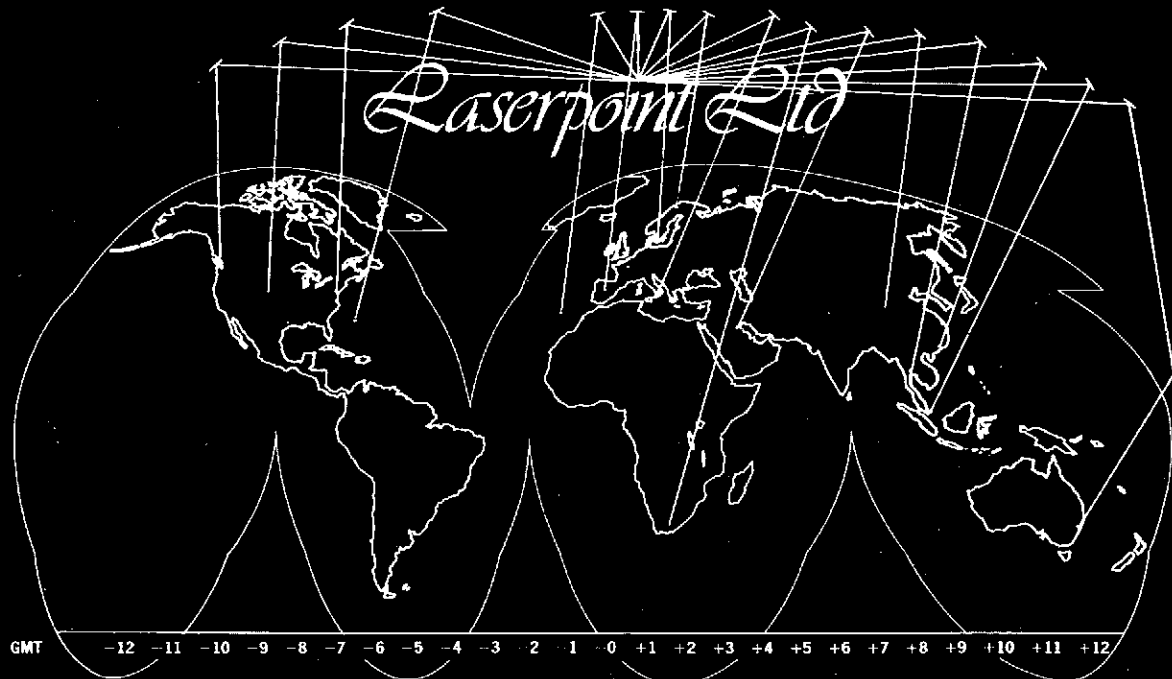
It involves the gathering of the talents of composers and librettists so that they will create new operatic forms which will come to more than the mere combination of their respective skills. And the fact that within the same complex there is a main auditorium, a modular auditorium, an amphitheatre and a studio all in close proximity should, it is hoped, ensure the flexibility in the programming that bring each component to its best advantage.

The management team will be set up and in operation by late 1986 and will immediately start work to prepare the programme for the opening season in mid-1989. With a venue that will also include a library and documentation centre, exhibition space, audio-visual presentations on current French and international opera, 2 restaurants, a broadcasting centre, boutiques (including bookshops, record shops, violin makers etc.) coupled with the usual French flair for the special occasion the task should not be too difficult.

**John Offord.**

**Note:** The artistic director for Opera-Bastille will be appointed later in the year, and further senior staff including the technical director will be appointed in the spring and summer of 1987. For all information on the project, the contact is as follows: Etablissement Public de l'Opera de la Bastille, 29 boulevard Bourdon, 75004 Paris telephone Paris (1) 42.74.25.12.

## The sun never sets on the Laserpoint machine ...



Every hour of the day and night, someone, somewhere is enjoying a Laserpoint Lasershow. Come and join them!

**Laserpoint Ltd, 44/45 Clifton Road, Cambridge CB1 4FD**  
**Telephone: (0223) 212331 Telex: 817281 LASER PG**



# The Splitting Image

## John Offord explores the multi-direction of Laserpoint

Laserpoint will soon have a product bearing its name that future generations will assume the company was named after. The Laserpoint is a laser pointer in fact, and it serves as our direction-finder to a company that is a world leader in laser light creation.

Andy Holmes, managing director of Laserpoint, was working in scientific laser scanning in Cambridge when his company was approached by 'The Who' and asked to produce laser effects for one of their shows. "It was delegated to me to go to Shepperton to see what could be done," he explained. Together with Chris Matthews, who was involved with The Who productions, he saw the huge possibilities open to them, and they decided to develop the entertainment market.

"We thought there would be a middle path to tread that would suit the industry—a reliable hire service that would have good equipment, and be on time," he said. During the rest of 1978 they took on extra projects in their spare time, and their first major breakthrough came when Purchasepoint commissioned them to work on a major Ford vehicle launch in Brighton. "The designer was Paul Staples," Andy Homes explained, "and his vision made it possible." It was the first use of an Argon Ion laser in a

trade show environment in the UK, and provided laser writing and effects using a single laser.

They immediately went international, and just two months later were in Venice for T.F.A. ElectroSound and an IBM Conference where they were the first to use Krypton and Argon Ion lasers in a trade show environment. Another two month jump away and in mid-June 1978 they were at it again in The Hague for a General Motors Opel car launch organised by McCann Erickson. Here they were the first company to use-synchronised laser writing images with both audio-visual and live performers.

Laserpoint Limited was formed earlier in the first year to organise all this creative work. "We bought an off-the-shelf company, and I remember sitting in a pub in Wardour Street dreaming up the name," said Andy. For the first shows they hired in the equipment, modifying some as required. But what was important was how they actually used it.

The service was sold by word of mouth, and by the end of 1978 they had completed at least ten projects, built their own effects equipment, and ideas were beginning to be developed. And all this was being operated out of Andy's house and garage, and on a part-time basis.

From here on, Andy Holmes was on his own, and gave up his full-time job with Laserscan, renting a 2500 square foot warehouse ready to take his new company into the eighties and beyond. After 5 years space had run out, and in early 1986 they moved into their present 7500 square foot unit—with room for expansion to 10000 square feet. Twenty-five staff now look after a turnover of £1½m, about 60% of which is overseas business.

"We are still an entertainments orientated company. In the old days we sold the service, but things have moved to the sale and installation of equipment," he said. Now, about 10 to 15 per cent of turnover is from presentations, with a further 40 per cent from sales and installation. The rest is from the growing audio visual operation, including multiplexers, that will soon become a separate division of the company in its own right.

A very big jump in growth will come about if just one of several huge projects currently under tender come Laserpoint's way. "We are now getting involved with architectural displays," Andy explained. "What's another half million to put a system on a roof when you've spent £250m on a new building? It just needs one to take the plunge!" And



A Krypton Laser with an Aries Controller incorporating 4 scanner pairs installed by Laserpoint at Shen Szhon Country Club, People's Republic of China.

evidently their only competition is from a company on the western seaboard of the United States.

Andy Holmes and his people at Laserpoint look upon their work as an "art" form. "It is a matter of combining the technical and the business, and then throwing in the screaming blob called art. Potentially it's a three-cornered recipe for chaos!" In other words, any situation that is out of control could end in disaster, while on the other hand if you get it right it will be a huge success.

Laserpoint's system of dealing with operations is one of total flexibility. "We give people a primary role in the company, but they switch over according to demand. I believe this keeps interest going, and is very good for staff," he said. Key people are Sussie Christiansen, imported from Denmark to

look after export sales and publicity; sales manager Simon Molseed; technical service manager Romano Malocca, who looks after hire and installations; and Niels Thomsen who covers research and development.

As staff move from one developing project to another, so too does the influx of work coming into Laserpoint's hands, in a kind of creative circle. "Laser displays, although only 10 per cent of our business, are a huge starting point for other things," explained Andy Holmes. "From there it often progresses to hire and installations. A very exciting crossover of techniques is beginning to happen."

Laser equipment has obviously got to be operated by the right pair of hands, and the repetitive message, whether it's creative or technical, is the importance of "getting it

right". Equipment is built from standard units—"so we can be as flexible as we like—but the components are standard. All hire work and installations are undertaken with Laserpoint's own crews, and coupled with any installation job is the training of venue staff. It has to be a happy liaison between the technical and the creative. "The balance has to be struck," Andy Holmes emphasised.

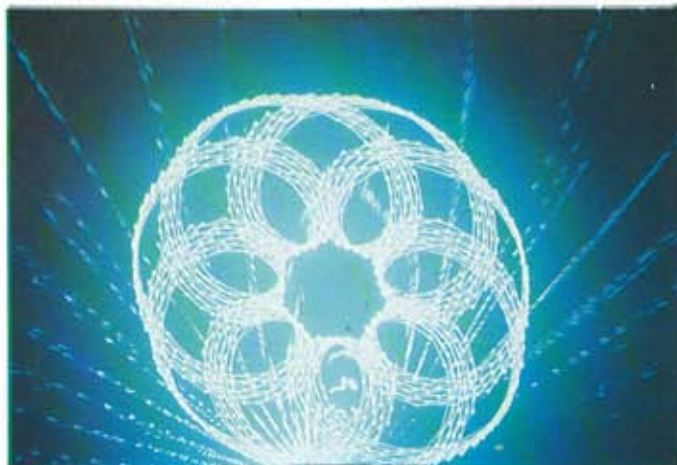
Which leads quite naturally on to safety standards. "When plans are complete we draw up what the laser equipment will do, and complete the necessary documentation (PM19) for laser displays. All our crew know the equipment, and they have to comply with the guidelines." To enable those choosing to use lasers in their promotions or productions to rest happily at night, four of the



First there was the single beam across the Conference Hall . . .



. . . Then it could be split into a fan . . .



. . . Scanning systems drew patterns . . .



. . . and hit the sky with splashes of light . . .



. . . The infinity tunnel was at last 3D . . .



. . . cars were revealed through it.

and Discotheques saw the light!

major companies in the field have got together to standardise training, and they each issue certificates when training has been given to venue operators.

The only dangerous beam from laser equipment is the one that comes directly out of the laser unit—which is why the equipment is kept high up, and well out of harm's way. In Laserpoint's showroom, I watched a demonstration of effects produced by their 18 watt Argon laser, a double-ended version, with 10 to 12 watts from each end.

"We were the first people, as far as we know, to double-end a laser for the entertainment market," explained Romano Malocca. This was for the Cliff Richard Show in 1983. (The laser unit produces a lot more power inside itself than can be transmitted by a single beam, and double-ending a unit utilises some of this vacant power.)

The most creative jobs for Laserpoint are product launches and theatre. "Producing companies come up with an idea, and we have to sit round the table and work out and develop things. We have got to get on well with lighting people, for obvious reasons," said Andy. And a project like the production of 'Time', featured in this issue of *L+SI* is food and drink to the creative talents available at Laserpoint, and the reason why so many desks were vacant when I visited their premises during the period of the final rehearsals of the show.

The future for laser creativity, at the suggestion of Laserpoint, may well concentrate



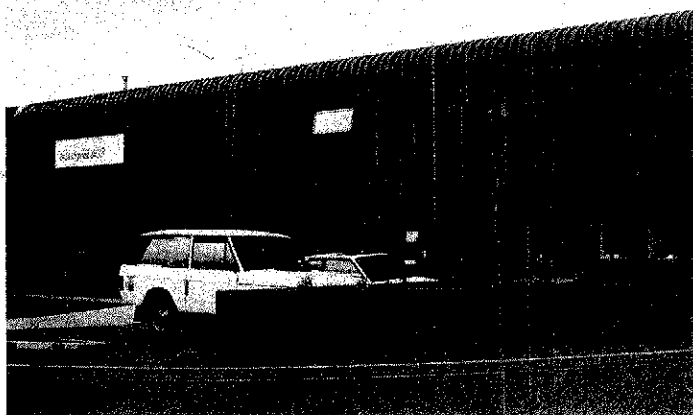
Andy Holmes with the new "Laserpoint".

itself in two major areas. Firstly, there is general accord that laser graphics will improve drastically over the next few years. The other area is in the field of remote effects.

At present, Andy Holmes' belief is that club/disco use of systems is a weak link in the chain. "Very few use the system to the full," he stated. Apart from a small number of

very keen operators who keep in close contact with the company after original installation, it may well be left in the hands of the laser companies themselves to do the creative work, and sell it off as a package in computerised form to venue operators. Will lasers be next in line after the heavy-duty disco effects equipment has had its day?

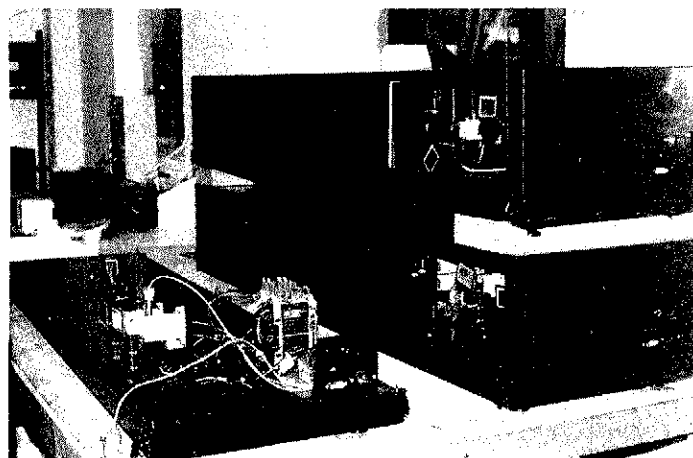
Currently the company is collating a huge



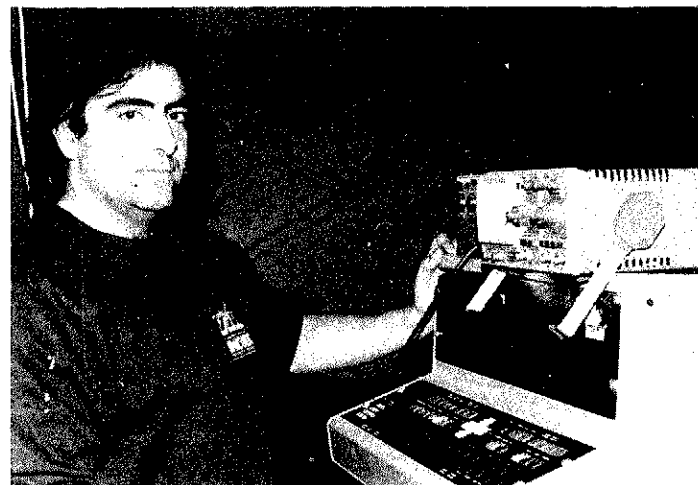
Laserpoint's new Cambridge unit.



Sussie Christiansen with a mobile Optical Multiplexer.



A laser effects head in production, and in the background the finished Twinscan—ready for despatch to a disco in Germany.



Romano Malocca at the controls in the Laserpoint Showroom.

amount of input from many different sources, including overseas dealers, to hand over to Niels Thomsen in research and development, and Laserpoint is anxious to ensure it gets as much feedback from operators as possible. They will soon be starting up a quarterly newsletter as part of an endeavour to keep a flow of comment and information coming to Cambridge. "We're not just into selling boxes—it's the extra element that counts," said Simon Molseed. The feeling throughout their establishment is that installers are just starting to look at the potential laser equipment on a far broader front—rather than as an addition to the established disco set-up.

In the immediate future, projects are as varied as ever for Laserpoint. Apart from the hectic last-minute previews for 'Time', they are working on a major installation for the new Broadway Boulevard in Ealing that opens in June, they have tenders out for major deals with Turkish Television in both Istanbul and Ankara, and John Player Special has a touring road show coming up that features lasers as part of a lorry-based touring exposition.

There have been many highlights in the creative career of the company including such nationally noted performances as their laser beam along the nought degree meridian at Greenwich, from the roof-top of the Royal Naval College to the Royal Observatory, pulsating across to Greenwich Clock Tower. That was for Seiko, and part of the 1979 Greenwich Festival.



Effects head adjustments in Laserpoint's own showroom.

## Laserpoint Equipment Line-Up

Laserpoint offer four display systems. The **1000D Controller** is capable of memorising 32 pre-programmed beam positions, which can be adjusted from the control keyboard by use of the cursor keys. Abstract and spiral patterns are created by a row of six knobs (potentiometers). The size of pattern is determined by a seventh control and moved in vertical and horizontal directions by a joystick. The beams and small beamed figures can be chased in 4 modes, and these chases can be controlled automatically, manually, or by sound/light. A further key introduces a diffraction grating through which all the effects can be projected, splitting component colours of the laser.

The **Scorpion** microprocessor-based control system varies from the 1000D in that it can memorise patterns, words and pictures in complex sequences and recall them at the touch of a button. The system also has standard type faces for keyboard laser writing and will accept a digitiser for graphic projection and complex animation production.

The new **Aries** control system is the natural progression from the 1000D and Scorpion. It combines all of their capabilities, improves on many of the functions, and accommodates many additional features. Similar to a synthesizer, it has become playable like an instrument, but with many more advanced functions. The Aries takes advantage of improved semi-conductor technology and state of the art laser techniques to enable more functions to be incorporated, whilst reducing the complexity of operating the controller and reducing its size to an absolute minimum. The projection unit (effects head) is designed to accommodate an Argon Ion laser and/or a Krypton Ion laser. With the Argon emitting blue/green and the Krypton producing red, a full range of colours including white light can be achieved when the lasers are combined.



Laserpoint **Ultrascan** is an advanced laser control system capable of displaying high resolution graphics and text for use in the conference and entertainment industry. It consists of two major parts. The computergraphics system uses the latest 16-bit microprocessors, programmed with special Laserpoint software for editing and storing animation sequences, logos, text, business graphics and so on. Using a high resolution digitizer pad, the operator can enter a complex image into the system, easily modify it on the VDU screen, and then use it as part of an animation sequence, as part of another image, or as a special effect in conjunction with, for example, a multi-image slide show.

The other main part of the system is dedicated laser scanner controller developed to provide the highest performance available. The unit is capable of displaying 1000 points per scanner pair, equivalent to approximately 40 characters of text, and of regenerating this image up to 50 times per second, removing any of the well known flicker normally associated with conventional laser display systems.

Laserpoint's range of **Multiplexer** systems for audio visual work are industry standards, and range from the PX 2 way - 12 way for 3/8" tube camera, with the MX as a mobile version, to the MPX 3 way - 12 way for 3/8" - 1 1/4" tube broadcast cameras.



Simon Molseed.

Their latest achievement is to a very small scale, and is the little item referred to earlier that uses the company name. The "Laserpoint" is a direction indicator, hand-held, that will be used mainly in conference and presentation work. It has been three months in development. "The key item was the tube," explained Andy Holmes. "We looked at what was on the market, and made ours lighter by 30 grams, and cheaper by about £100. And the automatic re-charger will work from any mains supply, anywhere in the world."

# ON TOUR

Keith Dale

Recently, the fashion industry has presented many designers with the opportunity of using creative lighting. One exponent of this particular form of lighting using techniques from both theatre and rock, is David Atkinson, and Catriona Forcer interviewed him at a recent Jasper Conran show.

David Atkinson has been involved with industry's lighting designs for some years now, and his client list reads like a who's who of fashion, including such names as Betty Jackson and Zandra Rhodes along with British Home Stores and the bastion of them all, Marks and Spencer. It is indeed a tribute to David's work that so many fashion designers trust him to light their shows, particularly as it seems that in general, the lighting must be designed to be bright enough for the various cameras yet contain an element of dynamism. This has to be combined with a balanced look that does not detract from the clothing. All of these factors must be taken into consideration along with a much lower ceiling height for the lighting instruments than one would usually expect.

On a slightly different note, it is obvious that whilst looking through the equipment lists we can see a general trend to designers



David Atkinson.

using more and more colour change devices and moving lights within their shows. This may be for effect, or purely as a means of achieving more, with less. Whatever the reasoning behind the inclusion of such

devices it is apparent that their use will develop further over the coming years in wider fields of entertainment lighting. This will encourage further development of colour change and movement from various manufacturers as the products gain acceptance in markets that once considered any form of this technology useful only for its novelty factor. The consequent result of this must surely be that the entertainment lighting industry is about to undergo a change of attitude towards the control of lighting.

By the time you read next months **L+SI** I will be 'on tour' myself. It has been over a year since I last practiced what I preached—so I didn't hesitate at the chance of designing for Joe Jackson again when the opportunity recently arose. Not only has it offered me the chance to develop the lighting schemes that I have always worked on with Joe, but it also presents the ideal opportunity to meet any European or American designers interested in what I proposed in last months **L+SI**—namely featuring in this magazine the work of other international designers. Perhaps, if there's enough interest, you will not have to suffer my ramblings on lighting design too often!



The Jasper Conran Show—lighting design David Atkinson.

## Catriona Forcer talks to **David Atkinson** The Jasper Conran Show

**How did you become one of the main lighting designers for fashion shows?**

I originally trained in the theatre for about 1½ years and then I began to work for various theatre lighting companies where I worked with small fringe theatres. I also began doing car and trade shows and I gradually worked my way through the system into fashion. I was always very keen to work in fashion, and I set myself up with various lighting companies that understood fashion work.

That was about five years ago, and since then I've worked with most international designers because when a foreign designer like Giorgio Armani comes to England to do a show, he will approach an English lighting company to look after the lights. That's when I'm called in by the company or, as in the case with Jasper Conran and Betty Jackson, the designer comes directly to me because they what look they want, and they know that I will be able to give it to them.

**Tell me about the Jasper Conran show.**

Jasper talked to me about his ideas for the lighting and he showed me the clothes which were going to be modelled. He wanted to have a show which would be different from all the others, and would have a dramatic look rather than a straight open

white look. We start the show with Telescans because I find them an effective and very strong light source which can move in many directions.

I think that lighting is a very personal thing and with a fashion designer you can only hope that you have struck what he wanted. During this British Fashion Week I have been working on some of the shows with Patrick Woodruff who is actually a rock 'n' roll lighting designer. It's been great because we've been combining our expertise in the two fields, and Patrick's experience with the Telescan system has given the show a fresh, good look.

**What difficulties arise when you are lighting a fashion show?**

Unfortunately with fashion shows you have to remember that the television and camera crews need plenty of light to see by. You can start with a good dramatic effect to add some atmosphere, but then you have to pull out with a strong, white light. When I design a lighting rig like this I design it with angles very much in mind because it helps to create different looks for the clothes while still maintaining a functional lighting for the camera crews. The way I look at lighting for fashion shows is to always bear in mind that you have to have your basic open white rig. Then you can go for nice, strong colour washes all over the set, and also on the back of the catwalk. For example, yesterday I did the Betty Jackson show here there were a lot of yellow garments—so I accentuated this by washing the back panels in a similar shade of yellow.

I'm still battling to convince people that lighting design is here to stay, and there is so much equipment available like Telescans and Varilites. It is only recently that people in the fashion business have realised that a proper lighting designer and sound technician can drastically improve a show. Jasper's show is probably the first show of it's kind to be seen in the U.K. using good quality lighting.

**Are the younger and daring fashion designers more fun to work for?**

Yes they are. I used to do a lot of work for Amalgamated Talent, and these were fairly way out shows and the lighting was very important—with lots of effects with shadows and smoke.

**The British designer shows only come round twice a year—so what do you do the rest of the time?**

In between the fashion show of March and October you have the shows by people like Marks and Spencers and British Home Stores. You also have the odd fashion shows put on by designers for special events. I do the British Home Stores show which is a much tighter show than any of the designer shows. I work with a producer called Michael Landon who has very strong ideas and always produces a very exciting, theatrical show. The people that go to see the British Home Stores show prefer to see more of a spectacular show than a straight fashion show.

I would love to work in fashion for nine months of the year, but because it is so



Bedford Truck Launch—lighting design David Atkinson.



The New Lewis's Fashion Show at the Royal Albert Hall, London in February—designer Sandy McRobbie of Theatre Projects Lighting (details 'Equipment on Tour', February). Picture above shows the lighting rig during the final stages of preparation, and below the Show in motion. Photos: Nick Milner.



seasonal it is not possible. When I'm not working on fashion shows I'm doing trade shows like the Bedford Truck launch which I have just finished in Birmingham. Obviously the two are very different, but I like to work right across the board. I've also just finished an interior lighting design project for a hotel.

### Have you ever been tempted to go into rock lighting?

Yes, and I have worked with a few small bands. I did a tour last year in America with a small band and that was quite successful. If I was to do the lighting for a band I would really have to be into their music. But I do believe that in this industry it is better to specialize in one main market, and let that grow, because every show that I do is going to be that much better. With rock shows it is difficult to design a show and send it on the road with another guy because, like fashion shows, I believe that they should look spontaneous. So really you need to be at the end of the controls all the time to achieve a lively-looking show. But then I can't afford to go on long tours because I would be away from my main market for too long!

Occasionally my shows overlap, and rather than drop one I will bring in someone to operate one of them. For example the Bedford Truck show coincided with a conference in Eastbourne so I brought in Simon Rickman to help me. As trade shows are usually very tight cueing you have to have someone you can really rely on and who knows just what you want.

### What do you hope to do in the future?

I'm satisfied with the work that I am doing because I am constantly working with new people and new productions—which I find very exciting and stimulating. But one day I would like to set up a design consultancy which would cater for every lighting need.



Confrontation with the editor. John Offord snapped Keith Dale and Catriona Forcer at the recent ABTT Trade Show at Hammersmith's Riverside Studios.

# Equipment on Tour

## Sting

World Tour.  
Tasco Ltd.  
Tel: 01-528 3020.  
Lighting Design: Nick Sholem.

**Trussing:**  
16 x 2.4M Tasco box section.  
2 x 1.2M Tasco box section.  
2 x 5' Tasco box section.  
5 x 2.4M Telestage truss Mk.2.  
1 x 1.2M Telestage truss Mk.2.  
4 x Tasco box truss corner block.

**Lamps:**  
18 x Long nose Par 64 cans.  
2 x 8 light Mole lamps.  
9 x 6 x 16 Leko's.  
37 x Par 64 6 lamp bars.  
5 x 4 cell groundrows.

**Effects:**  
20 x Tasco Colorbank colour changers.  
1 x Tasco Colorbank control unit.

**Desk (control board):**  
1 x Avo QM500.

**Dimmers:**  
2 x 72 way Avolites dimming systems.

**Spots:**  
2 x Altman Orbiter.  
4 x Ultra Arc.

## Elton John

World Tour.  
Tasco Ltd.  
Tel: 01-582 3020.  
Lighting Design: Ian Peacock.

**Trussing:**  
11 x 2.4M Telestage truss Mk.2.  
2 x 1.2M Telestage truss Mk.2.  
10 x Telestage variable corner block.  
12 x 2.4M Telestage truss Mk.1.  
25 x 2.4M Tasco box section.  
4 x 1.2M Tasco box section.  
6 x Tasco box truss corner block.

**Lamps:**  
50 x Par 6 lamp bars.  
8 x 4 lamp A.C. bars.

8 x Short nose Par 64.  
4 x Long nose Par 64.  
9 x 4 cell groundrows.  
10 x CCT Sil 10 profile spots.  
2 x 4 lamp Par 64 Powerdrive bars.

**Effects:**  
22 x Colormax colour changers.  
1 x Colormax control.  
38 x Tasco Colorbank colour changers.  
6 x Tasco Colorbank cyc changers.  
1 x Tasco Colorbank control unit.

**Desk (control board):**  
1 x Avo QM500.  
1 x Avo Ultra chase.

**Dimmers:**  
4 x 72 way Avolites dimming system.

**Spots:**  
4 x Altman Orbiter follow spots.

## Depeche Mode

Europe and America.  
D.Lights Design.  
Tel: 0223 844500.  
Lighting Design: Jane Spiers.

**Trussing:**  
30 x 8' Telestage truss sections.  
2 x 4' Telestage truss sections.  
1 x 5' Telestage truss sections.  
6 x Flying fingers (containing Par 46's and Linolites).

**Lamps:**  
51 x Par 64 6 lamp bars.  
4 x Par 46 4 lamp bars.  
54 x Par 64 floor cans.  
8 x 4 cell groundrows.  
3 x 6 x 9 Leko's.  
4 x 400W U.V.'s.

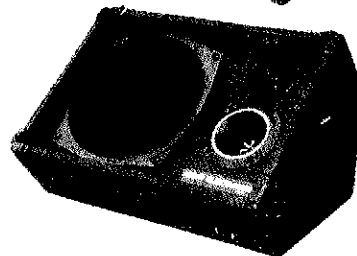
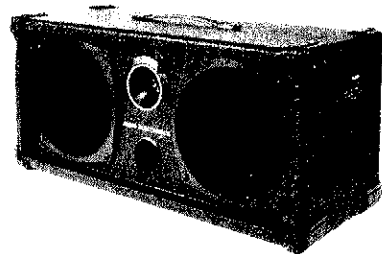
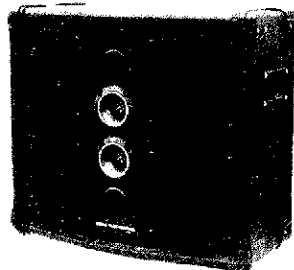
**Effects:**  
36 x CCT colour changers.  
1 x Celco MCS 9900 colour change controller

**Desk (control board):**  
1 x Celco Series 2 Gold.  
1 x Celco Series 2 Thirty.

**Dimmers:**  
2 x 72 way Avolites dimming systems.  
1 x 48 way Pulsar Dimming system.

## Audio Electronics Ltd.

Manufacturers of  
High Quality  
P.A. Loudspeakers



All bass mid range units manufactured  
in our own workshop.

## Audio Electronics Ltd

ELM PLACE, STATION ROAD, RUSTINGTON, WEST SUSSEX. Telephone: RUSTINGTON 0903 786483.



# Lighting 'Time'

**Andrew Bridge's explosion of light at the Dominion.**

With his commitment to bring the lighting designer and technicians into full focus, Julian Williams profiles Andrew Bridge exclusively for L+SI, and discusses his work at the lighting desk for Dave Clark's mammoth production of 'TIME'.

A production such as Time, which opened at the Dominion theatre in London's West End on Wednesday 9th April would never before have been possible, and in theatre technology terms it is the perfect example of the 'state of the art' as it is today.

In my view there is no other place on Earth where 'The Best of the Best' of theatre production specialists, together with theatre's latest technology could have realised producer/creator Dave Clark's magnanimous conception.

'Time' is about making the World a more secure, safer and caring place, suggesting how with reason and thought confrontation can be avoided. 'Time' is set in space and the

Earth is on trial for its survival and its continued existence.

The trial takes place at the 'High Court of the Universe' and is presided over with 3 judges, Trigon, Lagus, and Morgua. The Earth is represented at the trial by a 'Rock Star' (Cliff Richard), and the prosecutor is Melchisedec who is the 'Lord of Time'. The witness on behalf of Earth is space pirate Captain Ebony. All are ultimately answerable to Akash 'The ultimate word in truth' (portrayed by Laurence Olivier with the aid of a unique theatrical technique created and directed by Dave Clark).

As the show opens we are looking onto the back of a Rock concert when slowly the entire set and rig revolves 180 degrees to reveal a battery of Par lamps flashing in domino sequences from a multi-rigged truss, with chasing Vari-lites, focusing on the performing Rock Star.

Following this, we are transcended by the magical power of a simulated sequence of technical 'effects' known as the 'Ascension'—the 'ultimate' transformation

scene?—while the Rock Stage folds away, complete with all its rigging, into the depths beneath the stage. Two million three hundred thousand and sixty-five light years from the Earth we eventually arrive at the 'Andromeda Galaxy' in the Universe of Space, and are present for the landing of the Flying Saucer (known in the trade as 'The Disc'—which takes up the whole space of the stage area when in its horizontal position) at 'The High Court of the Universe'.

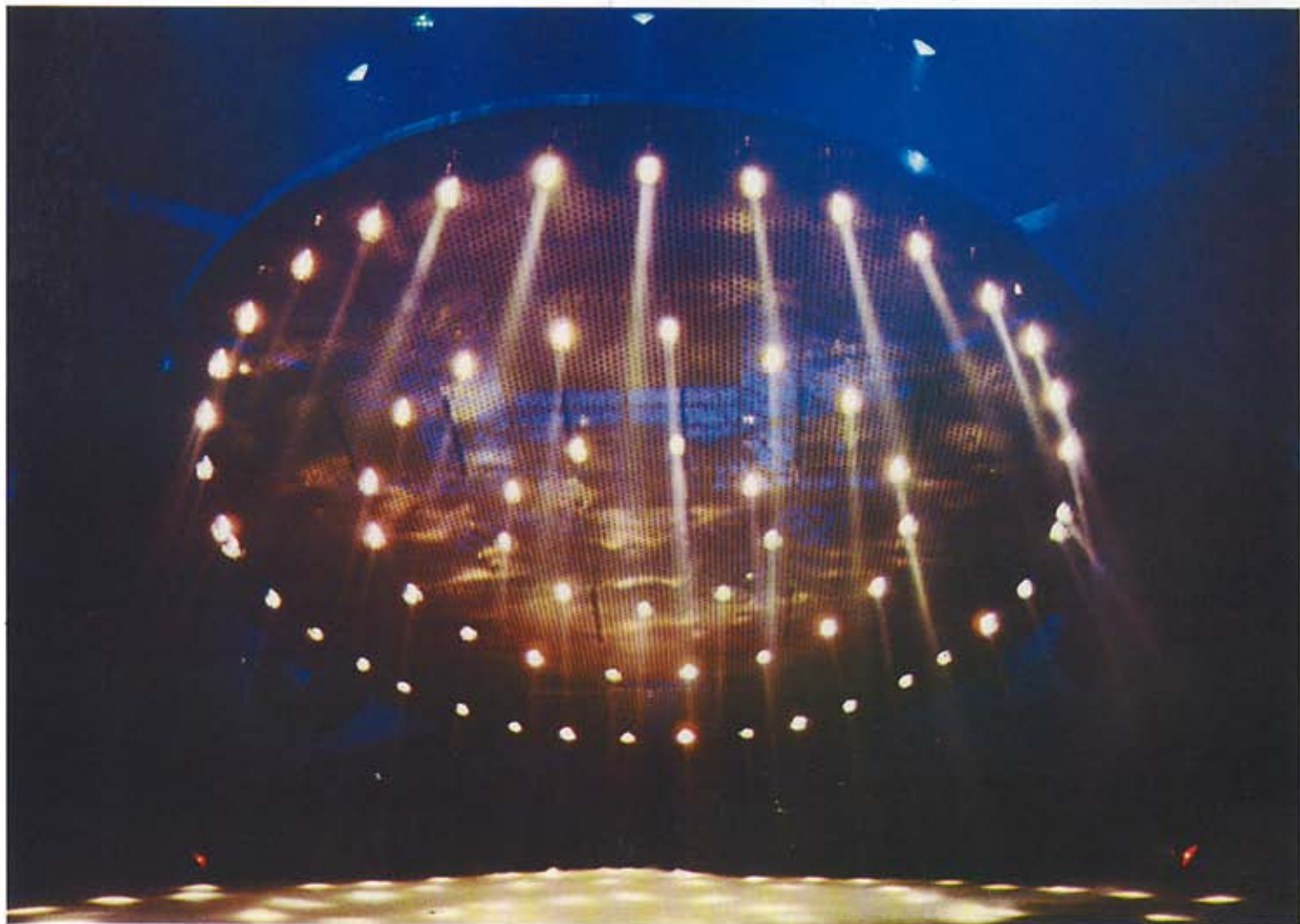
The 'Disc' moves by hydraulic pressure on traversing shafts at each side of the stage, and will also pivot and turn from a horizontal position to a vertical position. The controls are off stage on the fly floor, and operated by one operator who adjusts the speeds and moves to digitally pre-plotted positions. To move all this machinery in a show situation requires a teamwork effort from the stage management and production crew to be in visual position from all sides while it is all in motion (including from the audience), and to be verbally communicating with each other when checking its passing deeds. So



UFO's and the Time Lord with lights directed towards the audience.



The Disc-Flying Saucer—in vertical position with flippers (above) and in an almost horizontal position as it lands (below).





**ANDREW BRIDGE—Lighting Designer**

Andrew Bridge trained in London on a technical drama course and then worked as a technician for the Welsh National Opera and for Glyndebourne Festival Opera. From 1973 to 1978 he was lighting designer with the London company Theatre Projects. He now works as a freelance lighting designer and has lit productions of **The Rocky Horror Show** (Europe), **Scala Espectaculo** (Barcelona), **John Paul George Ringo and Bert . . .** (UK Tour), and in the West End, **Kennedy's Children**, **The Canterbury Tales**, **Tomfoolery**, **Billy Bishop Goes to War**, **Carte Blanche**, **An Evening with Tommy Steele**, **Oliver!** (also in Canada and on Broadway, New York), **Blondel**, **The Boy Friend** (both in the Old Vic and the West End), **Abbacadabra** (with Elaine Paige), **Little Me** (with Russ Abbot) and **Torvill and Dean—The World Tour** in Wembley, Nottingham, Canada, Australia and the USA. He has also lit concert shows for Bing Crosby, Julie Andrews, Tommy Steele and has been Shirley Bassey's designer since 1976, travelling extensively with her. In London he now works with the design group Imagination, who specialise in international presentations, conferences and exhibitions.

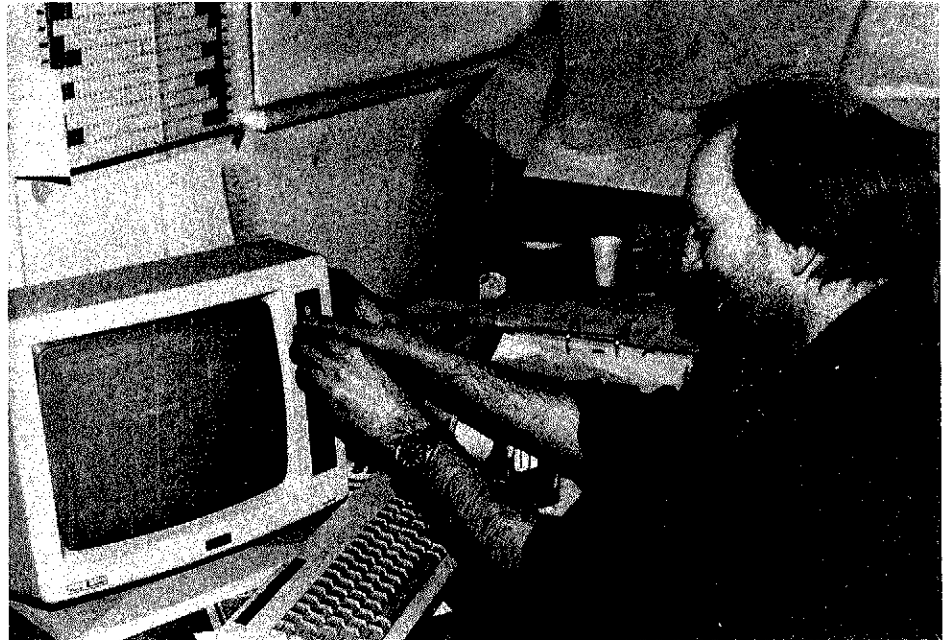
sophisticated is some of the aviation type of equipment being used that with precision leads, in certain tolerances the equipment will refuse to manoeuvre.

Discussing the production with Andrew Bridge, his view is that: "in this day and age any amount of technology and equipment is available—which in itself is enough to ruin a show." And he is also of the view that the production crew is now more important than ever before for a designer.

Part of the brief from set designer John Napier called for a big 'Ray Gun' effect requiring neons whilst running a laser effect from all directions. Also, the walls of the auditorium have to "explode into light" for a prime visual effect.

Andrew explained: "You simply have to follow the set designer—if he says he wants the floor to light up then you have to use '600' Linolites to light it up. Then the GLC want it all hard-wired in as a permanent installation." The cost obviously increases as a result.

Pacing each effect for such a show as this is a major task—but each and every plotted effect has its purpose, and is carefully fitted in to the production. Although there are over 500 LX cues—almost 100 in the first ten



All show lighting data is stored on an Amstrad micro computer.

minutes!—Andrew knows what he wants to achieve. And he wants a lot of variation. "The lasers are there to create a 'wall' to get the suspended and floating 'Judges Thrones' onto the set without being previously noticed—being part of the scheme of things like a sparkling back wall in a Night Club," he told me.

The concept for the lighting of the show he says "requires the brash and sharpness of Rock and Roll, the dignity and subtlety of Opera, and mixed in with it the occasional style of West End musical. In addition to the

discipline of a West End theatre production you are limited with the spontaneity that normally comes with a Rock and Roll concert. As the first part of the show is in fact a Rock and Roll concert, we have to have a Rock show that is reliable but which still has live spontaneity. You have to let the operator work within a parameter just as the lighting designer normally works his own lights for a Rock concert. These are definite cues we want, and in between we have certain matrixes which the operators' can hit on drum attacks and punches."

**Time** was devised and created by Dave Clark. Book, music and lyrics co-written by Dave Clark for the Right Time Production Company Limited. Book and Lyrics co-written by David Soames and music co-written by Jeff Daniels.

Directed and choreographed by **Larry Fuller**.

Musical Direction by **Mike Moran**

Designed by **John Napier**

Lighting designed by **Andrew Bridge**

Special choreography by **Arlene Phillips**

Sound design by **Bobby Aitken** and **Jonathan Deans**

Chief Production Electricians **Howard Eaton** and **Michael Odam**

Chief Electrician **Paul Taylor**

Assistant to Lighting Designer **Simon Bruxner-Randell**

Lighting Operator **Andrew Olsen**

Vari-lite Operator **Andrew Gibb**

Laser Production Programmer **Gary Westcott**

Production Projectionist **Dave Middleton**

Head Follow Spot Operator **Mike Cordina**

Production Electricians **Jonathan Badger**, **Greg Hamlin**, **Nick Jones**, **Eneas Mackintosh**, **Mark**

**Doubleday**, **Mike Dawes**, **Vera Morgan**

Theatre Electricians **Tim Turner**

Production Manager **Paul MackKay**

**Equipment and Contractors**

Lighting equipment supplied by Theatre Projects Services Ltd.

Additional lighting wiring by Limelight Services Ltd.

Multiplex Control Equipment by Impulse Technology Ltd.

Dry Ice Machines manufactured by Howard Eaton Lighting Ltd.

Electrical Contracting by RWS Electrical and Audio Contractor

Lasers by Laserpoint

Lighting Boards: Kleigl USA, Avolites Limited, Vari-lites USA

Sound Equipment by Autograph Sound Recording

Main Scenic Contractor Kimpton Walter Ltd.

Hydraulic Systems by Delstar Engineering Ltd.

Neons by Argon

Vari-lites supplied by Samuelson Vari-lite Europe Ltd.

Specialist rigging by The Unusual Rigging Company

Optical Effects by Axtells



Howard Eaton (left) and Mike Odam—chief production electricians—pictured on the Rock 'n' Roll truck, hidden away underneath the stage.

To keep the running costs down the chief production electricians, Howard Eaton and Mike Odam use their Amstrad micro to assist them. They are, said Andrew: "Working to an incredibly strict budget. Every piece of lighting equipment is a standard item with no special effect being made for the purpose, although we are pushing barriers with firsts on some equipment.

"They have a special DHA Gobo designed by our production team which Vari-lite have had fitted into their units to create a multi-broken-up-beam effect—and a frost device to produce a soft beam image. Also moving Vari-lites on a counter-weight track on either side behind the Proscenium facilitate using the Vari-lite at a side beam position—allowing the flexibility of using the light under the moving Disc. Specially designed Par Cans with pattern 252 optical effects attached to produce a brighter image are projected onto the ceiling of the auditorium."

"For efficiency," Andrew continued, "we have installed the rig with hard-wiring and cable ties with no tripes used at all. In the Rock and Roll canopy roof John Napier has designed it to move into various positions around the set so the entire 450 lantern rig, which traditionally fills the space with lights, has been purchased for the purpose and is conduited and trunked and is also cheaper to wire in than cut up hire equipment.

**The lighting rig is split into three sections: Rock and Roll, Stage Area, Auditorium.**

**The Stage:** In addition to the Rock Concert rig at the beginning of the show, there is the traditional musical rig on the stage area which is complemented with various practical effects such as an array of illuminated spheres in a variety of shapes and sizes all over the backing of the set. On the back



Andrew Gibb at the Vari-lite control desk at the rear of the Gallery, with Andrew Olsen in the background.

wall, interspersed with hidden Star Strobes, are a multi-galaxy array of Fibre Optic Stars of the Space Universe. There are Linolites, inset into the main stage, which is the suspended and revolving 'Disc', with a battery of Lanterns and Floods internally installed. Interspersed all over the set, additional effects include Neons, Par 36's, Uplighters, Floods, and some disco 'toys'.

**Auditorium:** On each side of the Auditorium walls is a one-off effect known as the Ascension—which utilises 500 Par 36 units mounted into panels with rotating motorised mirror sheets. There is a large quantity of Arcline in the ceiling with more illuminated spheres and Fibre Optic Stars. In addition there are Disco Helicopters and small 'winking' lights in Ebony's Space Ship legs. For Ebony's Space Ship arrival there are a battery of Aircraft lights in the ceiling of the auditorium.

**The 'Judges Thrones':** There are three hydraulically operated 'Judges Thrones' each having its own operator on its base and mounted onto a hydraulic crane which can glide up and down and traverse around the set in any direction, towering above the actors, and each carrying a 'Judge' sitting on a Throne in the 'jib' position of the crane. Each of these units has a complete intergrated lighting rig and dimmer unit of its own which incorporate M16 highlighter spots, vertical coloured Neons into the Throne structure, Solar Projectors, a Light Box with white and blue Linolites, and Red Downlighters.

Neon and Electro Luminance costume heads light up to create an ethereal and slightly 'weird people' effect, who also have back projection material in their costumes.

**Flying Saucers:** These are mounted onto motorised pivoting 'trapeze rods', each having its own rig of Lanterns and a Vari-lite built into their structures. The latter often simulates a big 'watching eye' moving around the set when they come into a scene.

**The Laser system:** There are three Laser Heads; two mounted on the Bridge and one (with a split beam) on the back wall.

Andrew wanted to have laser beams coming from all directions on stage as well as coming out from all over the Auditorium ceiling—but he didn't want the audience to

#### Equipment Schedule

Main Lighting Rig:  
 232 Par 64  
 6 Par 36  
 6 Par 64/AC 8-Lite  
 112 Altman Leko  
 24 Century 8 x 13 Leko  
 32 Patt. 23  
 4 Patt. 23N  
 4 Patt. 243  
 1 HTI Prelude  
 6 Minuette  
 14 Coda Flood  
 12 Patt. 252 + FX  
 8 Bowens  
 22 Colorsette  
 4 Colomax  
 16 Vari-lite

Rock & Roll Truck Lighting Rig:  
 145 Par 64  
 218 Par 36  
 15 Par 46  
 122 Sunflood  
 14 Starstrobes  
 16 Beacons  
 10m Arcline  
 32 Linolite  
 12 Pyro-Flash

Lighting in Set:  
 400 Par 36  
 63 Par 46  
 24 Birdies  
 30 M16  
 6 Par 36 Scanner  
 2 Helicopter  
 2 Astrobeam  
 6 Optikinetic Solar 250  
 80 Starstrobe  
 78 GLS Lamps in Spheres  
 30 Light sources in Fibre Optics  
 25km Fibre Optics  
 150m Arcline  
 120m Neon  
 500 Linolites

Projectors and Follow Spots:  
 1 4kw Xenon 35mm Cine  
 2 2.5kw Xenon 35mm Cine  
 4 Pani 4kw HMI Slide Projector  
 4 Short Throw HTI Ultra-arc F/S  
 2 Short Throw HTI Lycian F/S  
 4 Smoke Processor  
 2 Cloud 9 Smoke Gun  
 4 Dry Ice machine  
 3 4 watt Laser (water cooled)  
 5 Remote control mirrors for Lasers  
 4 Mirror ball

Control for Lighting Rig:  
 1 Laserpoint Laser control system  
 2 Kliegl Performer II.2  
 1 60-way Avolites desk  
 2 160 x 20 Pin Matrix  
 1 Vari-lite desk  
 382 Dimmers (2.5k and 5k)  
 64 Multiplexed Relays



The Rock and Roll Stage and Rig, complete with coloured lights flashing.



The Time Lord's first entrance, enhanced by Vari-lite gobos and laser beams.



A long shot of Time Lord standing by the sign of infinity. The Judge's Thrones and Ebony complete the scene.



The Laser Gun Battle.  
38

know where they were coming from!

There are beam bouncers, reflecting mirrors and aluminium venetian blind deflectors all over the rig. For one effect the laser is bounced to the highest point of the Auditorium, from the Bridge and through the ceiling void. Beams zig-zag across the Pros arch in 'stop-start' fashion, controlled by seven servo shuttered mirrors.

The unique effect specially designed for the show is the Sheetsweep, and this is controlled via 5 servo sweep-arms for 2/3 metre linear mirrors to produce an adjustable angled curtain of laser. The effect is principally used for the Judges' Throne's entrance and Time Lord scenes. The laser scanners and servo mirrors are pre-programmed on an Aries 4 Scanner Effects Generator Panel and VDU, utilising designed software by Laser-point designers.

There are almost 60 laser cue sequences—being tied in with the main LX called cue sequence—activated simply, in a show situation, by a 'hard disc' computer with a 'go' button to run a performance.

**Projection:** Four Pani HMI 4kW Projectors are mounted into the Circle fronts. Each contains 14 slide effects with remote control. These are focussed around the auditorium walls and one is focused straight onto the back wall of the set. Also, 6 Pattern 252 Cloud effects are mounted in this position with Colour Wheels on them. Additionally, two specially adapted Par Cans with special effects are projected onto the Auditorium ceiling.

**Film Projection:** Two 35mm 2 kW Xenon Film Projectors and one 35mm 4kW Xenon Film Projector are mounted onto the front of the circle and are programmed by computer control. The 2kW Projectors (one for back-up) are for a computerised synchronous film as part of an Animatronic illusion for the portrayal of 'Akash'. The 4kW Projector runs an Effects Film.

**Follow Spots:** two short-throw HTI Lycium Follow Spots are mounted in the Perch positions with four FOH Ultra Arc HTI short throw Follow Spots (due to the mounting space available) mounted at the back of the



Howard Eaton and Mike Odam pictured alongside the lighting gantry at the rear of the gallery.

gallery. Each of these units have 'frost' filtering which creates a soft long-distance beamlight effect.

**The Control System:** The concept of this unique but very simple and totally flexible control system comes from Andrew Bridges' requirement to be able to call upon any one light for manual operation at any one time—and to be controlled by one operator. The problem, says chief production electrician Howard Eaton "is that the show has to run 8 times a week and for a long period, and there has to be consistency of operation". They came up with the idea of having a manual desk driving Sub Masters on a Memory Board so that via a system of pin patches any other channel could be called up. The problem was taken to John Singer of Theatre Projects who devised an interface to put the two systems together by using two Kliegl Peformer memory systems to handle the capacity of dimmers in use—each being capable of controlling 160 dimmer channels and giving a total of 320 control channels. These controls are used in conjunction with



Mike Odam (background) and Howard Eaton (foreground) crowd out lighting operator Andrew Olsen at the main lighting control for 'Time' with the Kliegl boards centre picture and the Avolites board nearest camera.

Colour Photography by

**NOBBY CLARK**

In his eighteen years as a professional photographer, Nobby Clark has worked with most of the leading theatre, ballet and opera companies in Britain. These include: The Royal Shakespeare Company, The National Theatre, The Old Vic, Ballet Rambert, the Royal Ballet and English National Opera. He has also worked on many West End productions including Andrew Lloyd Webber's 'Starlight Express' and 'On Your Toes'.

His journalistic experience includes seven years freelance for The Observer and four years for The Times as well as various assignments for The Observer and The Sunday Times colour magazines and a trip to China for Now! magazine. Film and television work includes David Hare's 'Dreams of Leaving' and 'Wetherby', Jack Gold's 'The Chain', Richard Eyre's 'Insurance Man' and 'Past Caring' and 'The Hotel du Lac'.

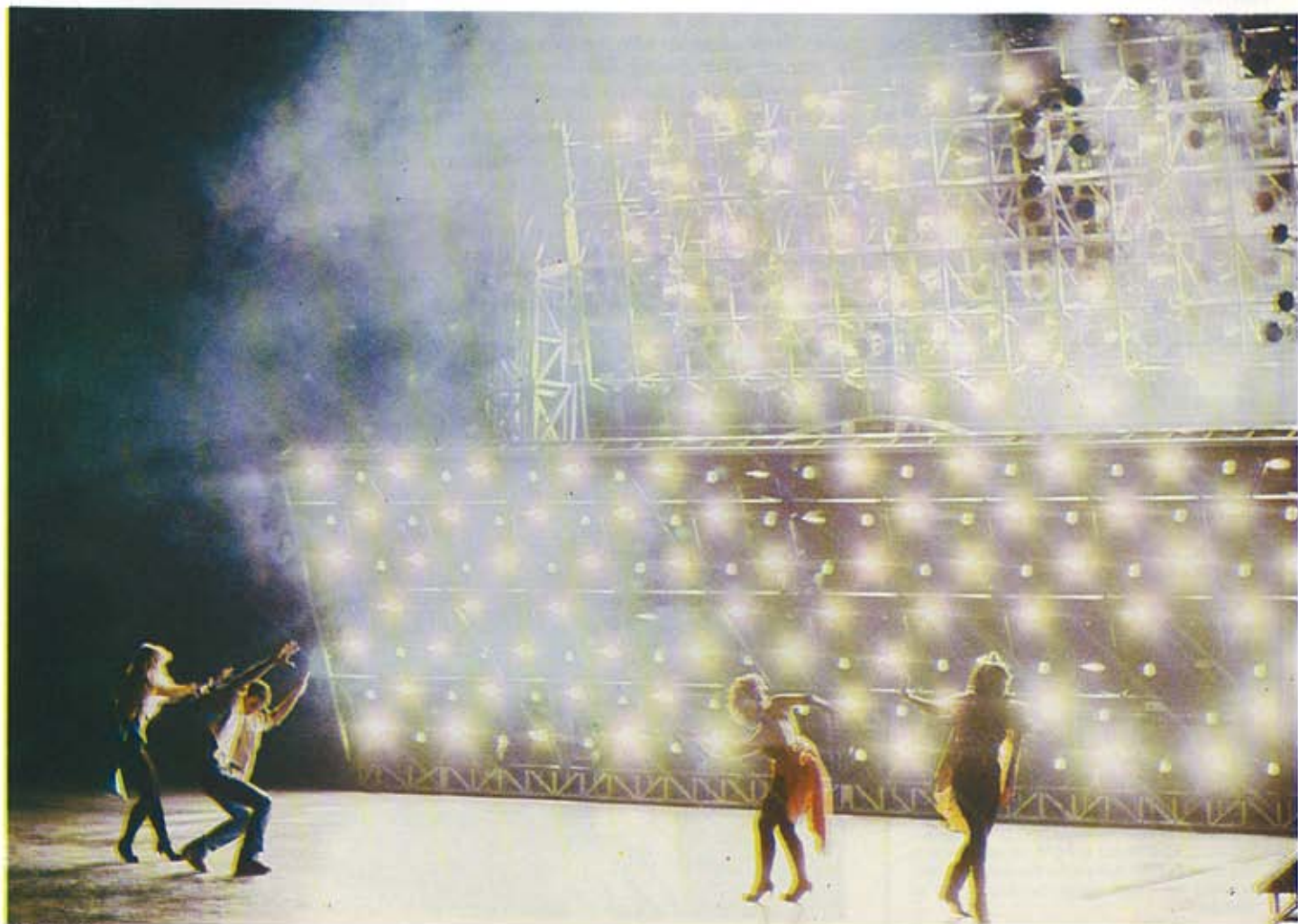
He has had several exhibitions including two at the National Theatre, both of which toured Britain and the first of which—Photocall—also toured Australia. His most recent exhibit was 'Mental Handicap Now' in aid of MENCAP which was at the Royal Festival Hall and he has just spent time working on Comic Relief concerts in aid of Ethiopia.



Julian Williams (right) discussing Time's lighting plan with designer Andrew Bridge.



Ebony's Space Ship arrives with flashing coloured lights.



The Return.  
40



PRODUCTION: **TIME**  
 VENUE: **WEMBA LONDON**  
 CLIENT: **DINO CLARK**  
 SUBJECT: **LIGHTING ROCK 'N' ROLL TRUCK**  
 SCALE: **1:25**  
 DATE: **JUN 86**  
 DRAWING NO: **LP3/ @ #**

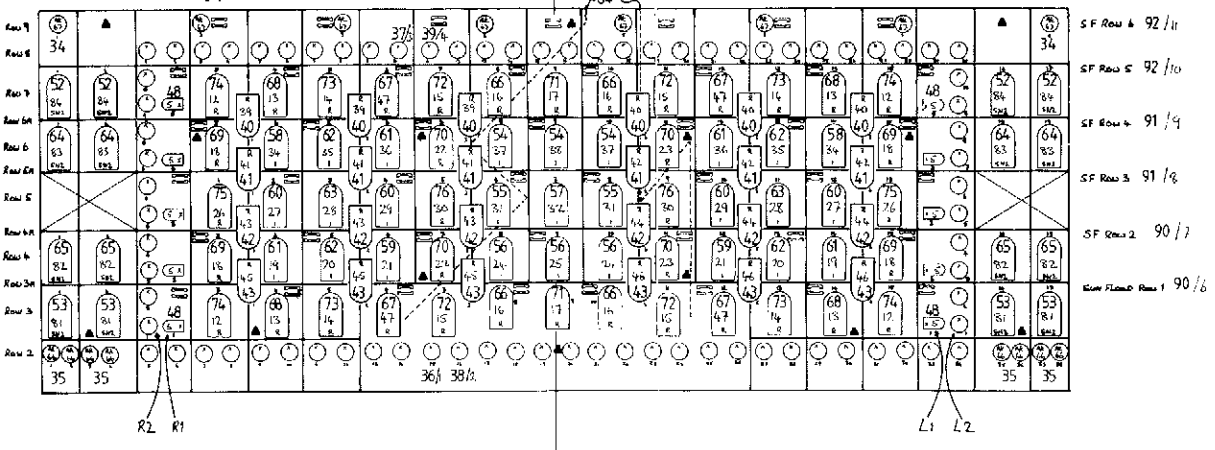
**ANDREW BRIDGE**  
 LIGHTING DESIGNER

MEMBER OF SOCIETY OF LIGHTING DESIGNERS LONDON 10025 21ST  
 TELEPHONE 01 979 0879 TELEFAX 020 900

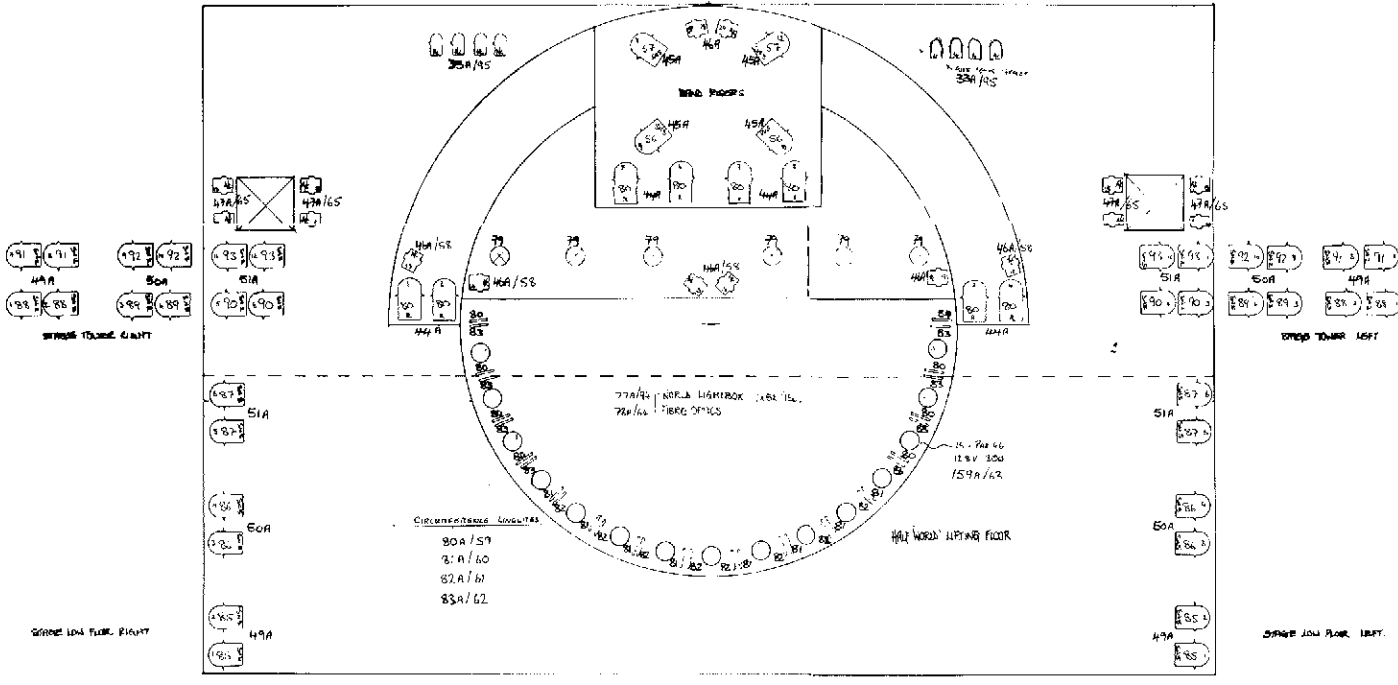


- 23 The 64/60 200W HSP - Search
  - 30 The 64/60 200W HSP - Search
  - 38 The 64/72 120W HSP - Search
  - 44 The 64/15 120W HSP - Search
  - 45 The 46 300 12V 5435 - Search
  - 78 The 36 450W K 12V 100L - Search
  - 79 RO TRANSFORMER 200V
  - 80 THE 36 450W K 12V 100L - BACK
  - 6 ROTATIONAL INVERTER FORD
  - 122 SUN FLOOD 500W 200V
- FLOORLINE STAYING FLOOR  
 2. - 1.5m  
 2. - 8m

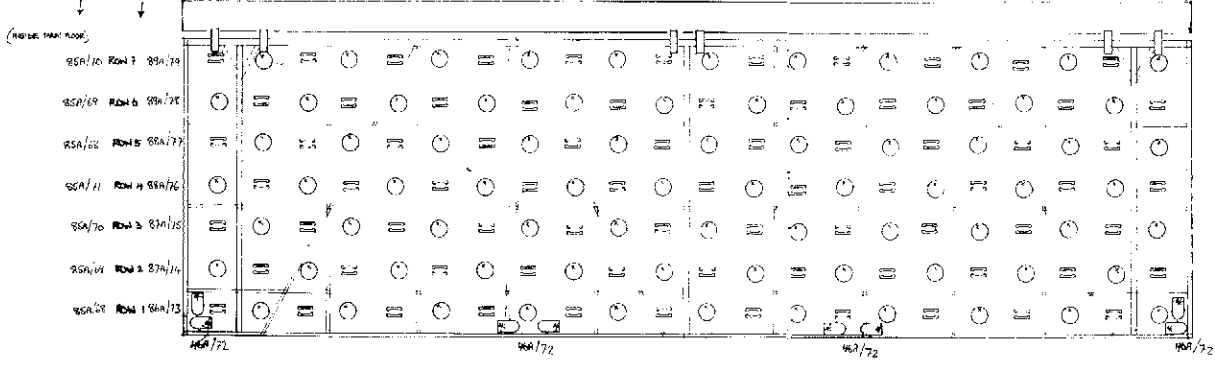
**Rock 'n' Roll Canopy Roof.**



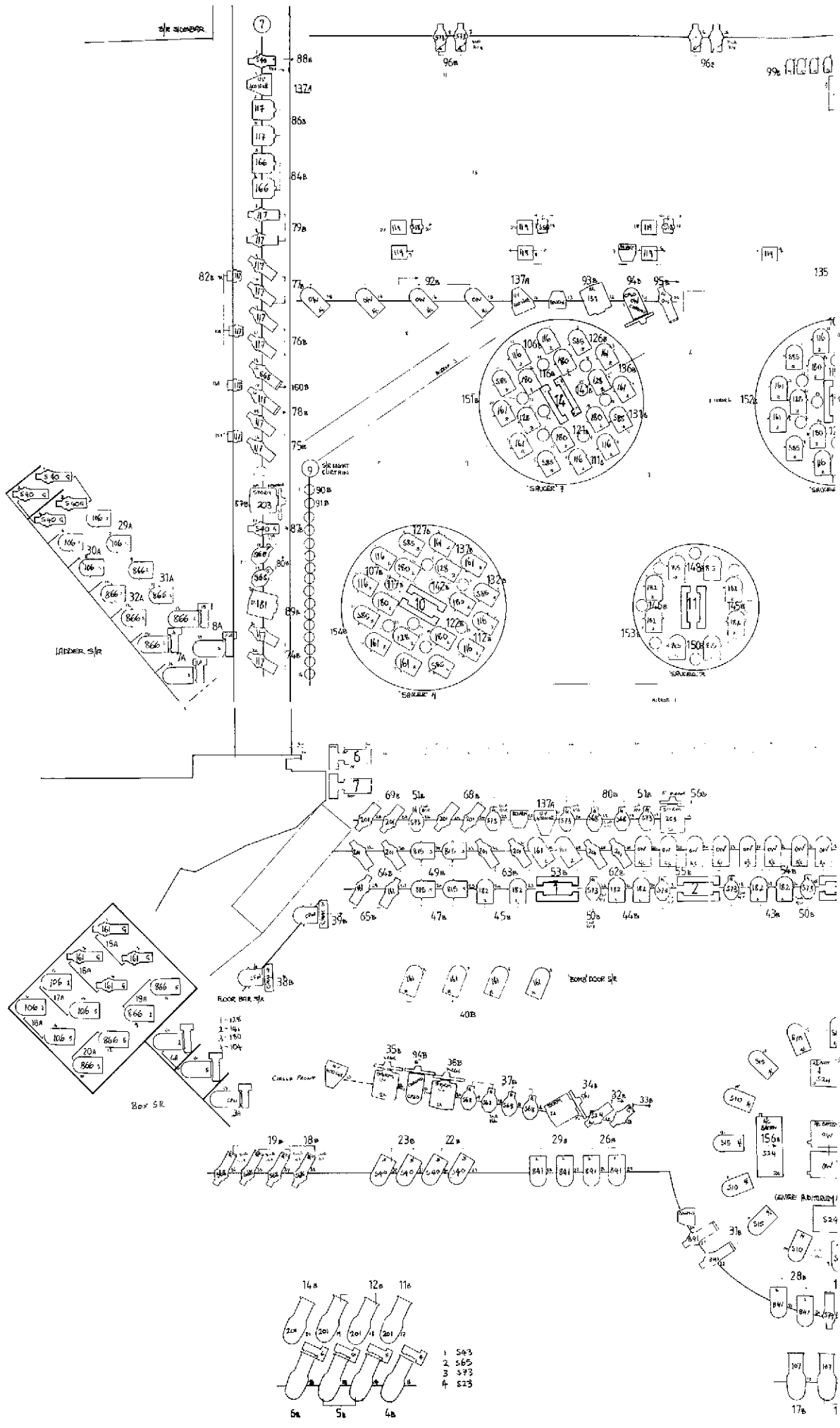
**Rock 'n' Roll Stage.**



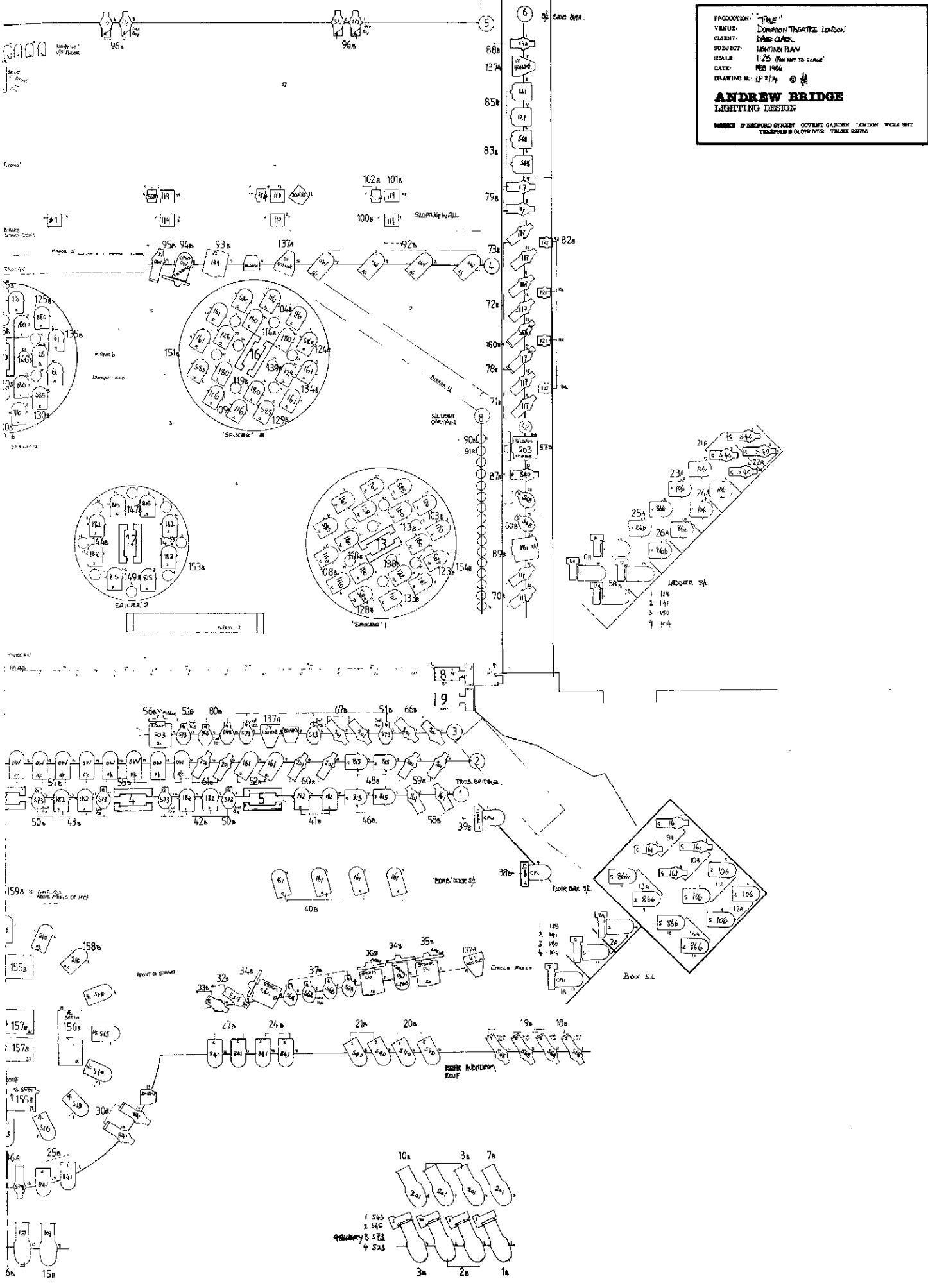
**Rock 'n' Roll Lifting Floor.**



OFFICE



PRODUCTION: "TIME"  
 VENUE: Dominion Theatre, London  
 CLIENT: DASH CLARE  
 SUBJECT: LIGHTING PLAN  
 SCALE: 1:25 (See Note to Scale)  
 DATE: Feb 1964  
 DRAWING NO: LP 7/7 © A.B.  
**ANDREW BRIDGE**  
 LIGHTING DESIGN  
 MEMBER OF BRITISH STAGES SOCIETY GARDENS LONDON W1M 5HT  
 TELEGRAMS: CLOVO 0274 TELETYPE 20096



a 60 way Avolites multi-group 3 preset manual desk for accessing memory sub-groups from the Kliegl boards.

The Avolites desk is used so that the first 10 Faders drive the Sub masters on Kliegl 'A' board. The second 10 Faders drive the Sub masters on the Kliegl 'B' board. Faders 31 to 40 drive a pin patch paralleled with the Kliegl 'A' board. Faders 41 to 60 drive the same arrangement with the Kliegl 'B' board.

In this way any channel may be accessed via Sub masters via the Kliegl memory system's Sub masters or via the pin patch. This allows the entire system to be controlled either via the manual desk, which gives the freedom to operate the show 'live' or with standard memory groups of states.

The two Kliegl boards are linked together to a remote Master Control panel thus allowing control from one set of controls.

It is claimed that the Kliegl Performer is the only system that has the capable chasing facilities required. Being an adequate hire stock item that can run a minimum of 400 channels, coupling them with the proven manual sophistication of the Avolites board (also readily available) has proved a good and cost-effective choice. As far as the lighting team are aware there is no make of board that can combine these requirements as a manufactured standard stock item. The control will, in addition, via a special 64 way multiplex switching system run independent circuits to control such practical effects as Smoke, Dry Ice, and Effects Motors.

Andrew Bridge has successfully brought together the principal elements of theatre in stage lighting terms by intergrating the use of movement of the 'intelligent' light with the Disco type 'toy' effects surrounded by a basic theatre light rig.

For the first time in the UK the Vari-lites are intergrated into a full scale legitimate 'running' show, by their subtle addition into a standard lighting rig. Using his lighting for specific stage effects, Andrew carefully focuses one's attention by accentuating the use of the light with immediacy onto a given area. He cleverly 'moves' the beams of lights to establish a given point—often implying an eerie supernatural being is communicating with us . . .

To set back for each performance, the starting angles of some of the lighting rig have to be measured—such as the seven Flying Saucers which are suspended above the lighting rig. These also contain a mini-light rig of lanterns to complement the main light rig. Due to the quantity of cues, to set up for each half of the show, both the Vari-lite and Kliegl Performer boards have to be downloaded, requiring a change of discs, tapes and cards to retrieve memory storage.

Communication and efficiency is the prime factor in organising all the sophisticated hardware involved and Andrew has high praise for his loyal and hardworking crew—some of whom have worked with him on other recent major productions.

At the Lighting Desk in the stalls, keeping organised with the three Lighting Layout plans of this somewhat complex rig requires constant updating. With his recently-joined assistant, Simon Bruxner-Randell—who is responsible for the Follow Spot cues—Andrew keeps track of the documentation while running through fast sequences of

## Lasers in 'Time'

L+S invited **Andy Holmes** of Laserpoint to give the background to use of laser equipment in the production of 'Time'.

"To laser or not to laser"—that is always the burning question when planning any visual spectacular of light, colour and movement.

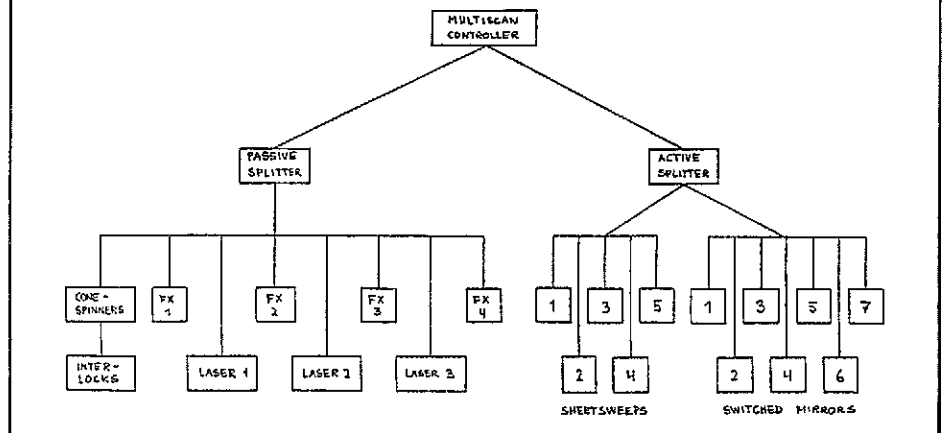
Lasers are accepted as a stunning special effect, but they are still misunderstood by the majority of designers and producers. Misunderstanding leads to fear, and that fear to rejection of the concept in many cases.

When a company of the size and stature of Imagination takes on a project of the importance of 'Time' musical, there are many areas of consideration for their producers—but Imagination's approach was to go beyond what was generally the 'norm' in laser effects, by laying down ideas that were both innovative and creative. They simply said that the classic situation of a source of laser light sending beams to mirrors and scanning patterns on a suitable screen surface was not acceptable. They wanted effects but no visible laser source—flexible barriers of laser light woven into the scenery and flown in and out as required. So by ignoring the basic fears of average producers, Imagination solved the decision making problem by laying a general brief before Laserpoint which enabled the company to design new ways of incorporating lasers into the show. I say that the problem for Imagination was solved, because if Laserpoint had not come up with the ideas on paper which satisfied Imagination—then the lasers would not be in 'Time' today.

So the scheme was drawn up to create a range of reveal-type effects which would enhance the impressive array of moving set and stage mechanics. The main-stay of this laser display is the battery of 5 remote servo mirrors—2 and 3 metres wide—slung over the stage and mounted on the back wall.

The sheet sweep mirrors are controlled from the multiscan 5 channel control computer which also handles 4 scanner outputs from 3 separate lasers. Like an AV computer, the multiscan controller enables the operator to load scenes in the order he wishes them to appear, and then run the show as a series of isolated cues. The whole show could be automated if required, but this is not appropriate when operating in such a complicated combination of cine, slide, lighting, sound, mechanics and hydraulics. Multiscan is effectively controlling 22 channels of separate but synchronised effects modules.

The system is configured as follows:



rehearsal cues, also keeping in constant communication with the main lighting board and Stage Management.

Andrew also has his Vari-lite Operator by his side while they design the visual effects, and programme the computer from diagrammatical plans, and for quick referencing use the aid of 'nick-named' jargon lighting positions. After this was achieved, the Vari-lite board was positioned alongside the Main Lighting Board and Laser/Cine control desks at the back of the Gallery for running the show.

Andrew was strongly supported by his chief production electricians, Howard Eaton and Mike Odam, who took it in shifts throughout the production period to stay by his side at the desk during rehearsals. They also organised a constant flow of almost 50 LX crew members working around the clock in 36 hour-plus shifts, to finish the rigging and maintain the equipment, which went on throughout the production rehearsal period of three weeks.

With each and every cue being carefully planned without any repetition of effects, Andrew has successfully brought together

the broad cross-section of Rock and Roll, Opera, and Musical theatre lighting, and it has taken much pre-planning to 'dodge' it through the machinery surrounding the set.

There are occasions when there is a definite feeling of floating in space—and there are some stunning effects such as the creation of the Time Lord scenes where the use of specially made Gobos in the Vari-lites and revolving shafts of Laser light blend mysteriously together. There is also clever use of the 'ever present intelligent watching eye' (of the Vari-lites) peering round at the audience from the Pros Arch. In the UFO scene they even 'nod' up and down to one and other as they traverse vertically along side boom tracks!

At the same time when the experts are saying that technology in the theatre industry is in danger of over-taking its purpose, it has to be said that the production of Time would not have been possible at all without the use of present technology. Both John Napier and Andrew Bridge have utilised it to its fullest potential, to hugely enhance a theatrical presentation in performance.

**Julian Williams.**

# “Give Me Some Light” — the essential training

Donald Walker

So yelled the guilty Claudius as his wickedness was exposed in the dark doings of Hamlet's play—disclosing also that Shakespeare acknowledged the subtle power of an atmospherically lit scene, even though this theatre was incapable of realising it in practice.

Today all that is different—but only just. Forty years ago, any self-respecting Director expected to light his own production. And a relatively simple job that was in most theatres: a couple of three circuit battens, ten mirror spots on bar 1 to pick out entrances and the main acting area; a few less on the front of the circle and footlights to “fill the shadows created by the heavy top lighting”, except that, over-used they more often created more shadows—giant ones on the back wall of the set. The whole operation was accomplished within the hour and plotted within another. This is not to underate the work of some of the nineteenth century producers who apparently worked atmospheric wonders with a blend of gas and limelight, but when in our own century the lighting designer became a new member of the production team, his survival depended upon his becoming swiftly indispensable.

Unconsciously perhaps, he tended to wrap up his skill in a sort of mystique which became more and more difficult to probe. Having only the one aspect of production to concentrate upon, he developed his craft into a totally new art form, “Painting the Stage with Light” and making heavy demands on the manufacturers for more sophisticated equipment for producing, shading and controlling the light.

So, from just one of the duties of a producer, and one that he “picked up” rather than learned, the ‘Art of Stage Lighting’ has developed into a skill which students must study in depth if they are to succeed in its execution. New equipment has found a home not only in the professional theatre but in the amateur and school field, so the need for training courses is fairly wide.

The technical courses run by the leading Drama Schools have provided for a select few, and the ABTT Training Scheme has covered a few more, although the loss of grant aid threatens to curtail these activities drastically. For the amateur, the occasional short course may be available at a local Adult Education Institute or Drama Centre; for the pupil in school, the chance of any meaningful instruction probably depends on whether or not a member of staff has the knowledge to pass on. And bearing in mind the new examination syllabi wherein a good knowledge of lighting can stand a candidate in good stead, effective tuition is educationally very important. Indeed, in the Theatre Arts Mode One Paper, half the available marks can be awarded for a well lit



“A small set piece representing a ruined temple makes a good three dimensional subject upon which students can experiment with dawn's early light. Part of the Lighting Course at the Curtain Theatre.”

scene with the relevant paper work to back it up.

So what form of training do these three categories of student, the professional, the teacher/amateur director, and the examination candidate need? Basically, the instruction is the same for all, and it is up to the in-

dividual how deep it goes. For the professional, a good knowledge of the physics of electricity will be expected, as the person is likely to take on the responsibilities of a qualified engineer. Otherwise training falls in a similar fashion for all three categories.

The average beginner will approach the

subject in trepidation, awed by the amount of ironmongery hanging up in most theatres today, and dazzled by the many different luminaires pushed on to the market by an ever increasing number of manufacturers. So the first essential in training is to cut through this mystique by pointing out that, basically there are only two types of spotlights: one that produces a hard-edged beam and can be used for isolating, highlighting or projecting predetermined shapes—the Profile; or one that produces a soft-edged beam which will marry easily with the beam next to it, and is used mainly as a general acting area light—the Fresnel. Hands-on practice should soon engender familiarity and confidence in the properties of these two, and the variations within the groups regarding wattage and means of focusing and so on will be quickly understood.

The next simplification concerns the properties of light and the student should quickly master three elements here: (a) the directional quality of light—where do you hand your spots to get what attitude from the subject? Where is the light supposed to be coming from? Not only the light but the shadows it creates can pass on unconscious messages to the audience; (b) the intensity—how bright do we want our stage? Where is the focal point (i.e. the brightest point) in the scene? Are we playing light comedy or dark mystery? and (c) the colour—what do we want our audience to feel? warm, relaxed? or cool, scary? and what climate do we want to establish?

An understanding of these three ingredients should help the student to read a script with an eye to how the light should look. Only so much can be done in theory—the great essential is practical exercise. One of the greatest problems for tutors in stage lighting is finding a well-equipped stage which can be made free for experimentation by students. Most commercial theatres have far too tight a programme to allow the luminaires to be moved around just for an instructional course. The best that can be expected is that students may be allowed to be flies on the wall during a lighting rehearsal, but the designer will probably be far too busy and concerned with his already tight schedule to take time out to explain what he is doing.

Even at Drama Schools, the number of productions which must pass across the available performance spaces in any one term, tends to put an unfair time pressure on a student technician who may easily end up as no more than cheap labour at the beck



**Donald Walker is the Director of the ILEA's Theatre Centre, the Curtain. The Centre is unique in its methods of using pure Theatre as a tool and stimulus in many educational situations but the main emphasis has always been on the backstage techniques; regular practical courses and exercises are presented in stage management, design, sound recording and lighting.**

and call of a busy lighting designer. One or two local authority drama centres (the Curtain in London is one) do organise their annual programme to include a slot for lighting and other technical courses.

In these cases it should be possible for real settings to be provided, even if only one feature-piece on a small area of the stage is available coupled with equipment available to light that particular situation without worry that it must be restored for an evening performance.

But homework first: now the students can be taken through the various stages of preparation slowly and thoroughly so that the logic behind the design is understood. Firstly there is the discussion with the director, set designer and production manager when the style, the budget and the venues to be visited can be discussed over the model of the set, and maybe alterations suggested.

Having read the script, maybe a rehearsal can be set up so that students can see how the stage will be used—but whether this is possible or not, they should be able to write out a formal synopsis of requirements cue by cue. Now a detailed scaled plan of the required rig can be made with spot directions indicated, with colour and circuit numbers

marked. Working with a few samples from a colour swatch and a small torch on the model will help to find out what is likely to achieve the desired effect, and save valuable time at the lighting rehearsal.

Hopefully a full realisation of the set model will now be built on stage and students can rig, colour, direct and focus their luminaires as planned. The lighting rehearsal will be a revelation to any student—whatever his age. The actual business of painting with light is vitally important, and no amount of book reading and theory can replace it. The more opportunities a student has to sit out there and call up a light situation the better. It is only this way that they will develop a style, learn how to adapt the guidelines they have been taught to suit the occasion, and see for themselves whether or not their theoretical homework has paid off. At the same time, other students will handle the controls, learn how to plot the cues, the pre-sets and the timings.

There are those who will say that this is unnecessary in the age of the memory board. Certainly the computer takes a lot of the slog out of dull repetitious work for the seasoned operator; it can do complicated manoeuvres which would be well nigh impossible on a manual board. Nevertheless, it is essential that the student first experiences the method and the thinking behind a sequence before handing over to a computer.

The practical experience of lighting an actual stage situation makes the student aware of many things: the careful cross-fade into moonlight which is killed by colours mixing; the fire spot which won't light the armchair without itself being in sight; the leading lady's beautiful blue gown, totally destroyed by the amber sunset . . . such mistakes are never made twice!

Then there is the realisation that light is only light when it hits something and is reflected back to the eye of the beholder. You need therefore to have bodies walking the set for you because you can't light fresh air. The moving cloud effect may fascinate the student but, used throughout Act Two, most probably the audience will be mesmerised by it and pay scant attention to the play.

Above all, there is the conservation of time—pressing forward to make the best use of the limited stage time before technical rehearsal starts. It is only in practical exercise work that these lessons can be learned, including the greatest lesson of all. Stage lighting, for all its creative possibilities, must remain a servant to the play and not its prime component.

# LIGHTING+SOUND *International*

For advertising rates telephone (0323) 645871



# This much power in this much amp.



The Amcron tradition of peerless performance was established with the introduction of the legendary DC300 series in 1967. Now, in 1985, on the back of modern technology and two decades of experience, Amcron bring you the Micro-Tech 1000 amplifier.

The Micro-Tech 1000 is the amp we've all been waiting for - lightweight, compact, and with more than enough punch to suit the increased power requirements of the digital age. These are the facts:

- 400 watts RMS per channel into 4 ohms.
- 500 watts RMS per channel into 2 ohms.
- 1000 watts RMS into 4 ohms - bridged mono.
- Safe operation at high power to 1 ohm.

- Reversible forced-air cooling.
- Amcron performance in 3½" rack space.

We believe that these facts, coupled with Amcron's reputation speak for themselves. But if you wish to know more about the Micro-Tech 1000 and how it can solve your headroom problems, call HHB Hire & Sales at: Unit F New Crescent Works, Nicoll Rd, London NW10 9AX. Tel: 01-961 3295. Telex: 9233393.



DENMARK, AVIDAN 02-179591. FRANCE, SCV AUDIO 01-8632211. ITALY, AUDIUM 02-2637853. HOLLAND, IEMKE ROOS 020-972121. SPAIN, AUPROSA 03-3517011. SWITZERLAND, MUSICA 01-2524952. WEST GERMANY, MUSIK PRODUCTIV 05451-140612.



# THANKS TO PULSAR, EVERYONE CAN NOW AFFORD A PROFESSIONAL LIGHTING SYSTEM.

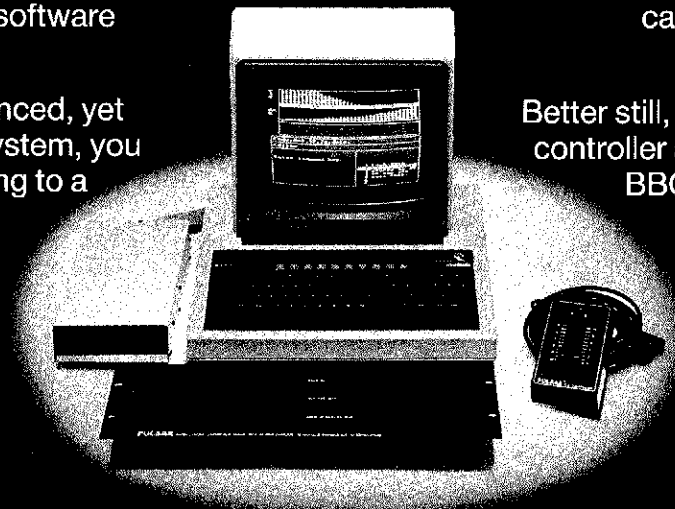
If you'd like to turn your performance into a more effective production, turn to the Intelligent Interface and software from Pulsar.

With this most advanced, yet surprisingly low-priced system, you can link your stage lighting to a micro-computer and program all your cues long before the curtain goes up.

The Intelligent Interface, which is fast becoming the first choice amongst schools and colleges, can handle up to 36 channels of dimmers at once.

Better still, it comes complete with a cue controller and essential software for the BBC Micro, to provide you with a lighting board that has the performance of a memory system many times its price.

*Even Scrooge wouldn't argue with that.*



## PULSAR

**Lighting for Effect.**



**In the first of an occasional series that will detail sound systems in UK venues of all kinds, L+SI takes a look at the recent installation at Nottingham Playhouse, a leading producing theatre. The work was carried out by Carlsbro Sound Services Limited of Mansfield in September 1985.**

The system was specified to have an overall performance that could cater for any of the varied activities carried out at the Playhouse for the foreseeable future. Constraints were placed on the loudspeaker components in terms of the requirement for unobtrusive appearance and uniform coverage of the auditorium. At the same time, it was required that the system be capable of generating high sound pressure levels for special sound effects and to cater for the possible performance of rock musicals.

It was decided to utilise Bose speaker components because of their high quality performance coupled with small physical size, which allowed convenient physical installation into cavities in the auditorium to stage left and right at both stalls and balcony level. The stalls speaker system comprises two stacks of Bose 302 bass enclosures and four Bose 802 speakers for Mid/HF. The balcony system utilises two speaker stacks each comprising of one Bose 302 Bass enclosure and two Bose 802 Mid/HF enclosures. The left and right systems are mounted in line to preserve the time relationship.

The house system is driven by 6 HH V800 power amplifiers, the amplifiers being set to give 3dB greater output at balcony level. The total power output of the house system is 4800 watts, and the system was commission-

ed using Ivie real time analyser equipment and gives even coverage over the whole auditorium. Main amplifier racks are located in a plant room to stage left and input signals are fed via balanced lines from the control room at the rear of the stalls.

The stage is also fed with 10 foldback circuits for sound effects and on stage monitoring. There are 8 circuits utilising a single Bose 802 speaker on each channel driven by 4 HH V500 power amplifiers. Two additional circuits are provided for sidefill monitoring and driven by 2 HH V800 power amplifiers. All ten circuits are driven by balanced lines from either the control room or an insert point on stage right, and all ten foldback channels have Bose equalisation applied at the amplifier racks. Foldback speakers outlet sockets are available to the left and right front stage and also left and right upstage, and may also be extended to four special stage boxes each with 6 mic inputs and four foldback outputs.

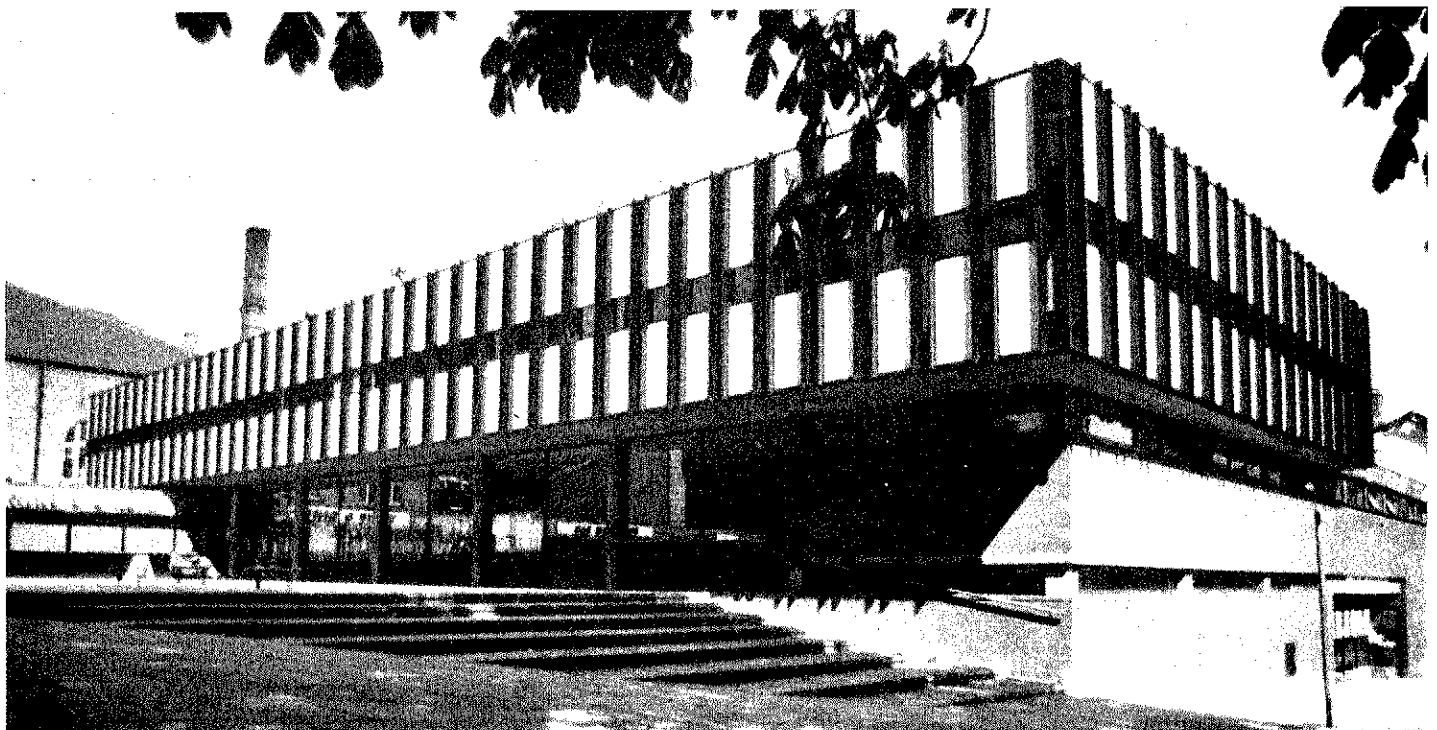
The stage boxes were specially designed to be low profile in order to be as unobtrusive as possible, and are totally isolated between mic circuits and foldback circuits. These stage boxes can be connected both at stage left and right and also in the orchestra pit.

The stage has been cabled for 32 microphone circuits with access points and patch panels at stage left and right and also via the special stage boxes. Eight circuits are wired through direct to provide phantom power feeds for float microphones and the other 24 circuits are isolated via balancing transformers which then allow bi-directional signal feeds from and to the control room. The system has two mixing consoles, a

Soundcraft 400B 24 channel main mixer and a Soundcraft 400B monitor mixer. Both mixers are complete with their own stage boxes and multicores to allow control room operation or operations in the main auditorium. The monitor mixer can also be operated from stage right.

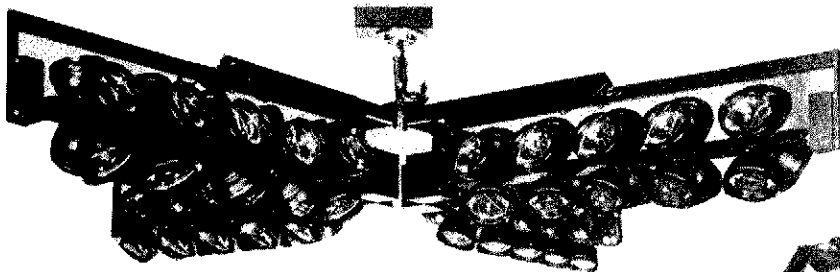
A complete TOA 5 channel radio microphone system has been installed with both lavalier and hand held microphones. Signals are received using a colinear aerial on stage right which is then processed by a Fringe Electronics RF amplifier to compensate for cable losses to the control room. Ancillary control equipment comprises of two Sharp auto reverse cassette decks, 4 Revox B77 tape recorders, 1 Roland Digital echo unit, equalisation and limiter equipment. A versatile patching rack has been installed in the control room which also houses additional amplifiers and circuitry for auditorium sound effects and for advertising equipment sound tracks.

A full compliment of microphones was supplied comprising Shure and AKG dynamic and condenser units. Also, additional equipment has been supplied to allow preparation of sound effects tapes in a separate editing suite. To date, according to the Theatre, the system has performed satisfactorily and has proved to have adequate performance for all functions for which it has been used. Great satisfaction has been derived particularly when the system is used for sound reinforcement, as the sound is extremely natural, with most of the audience being unaware that the sound system is in operation. The main sound output is also fed to an inductive loop.



Nottingham Playhouse

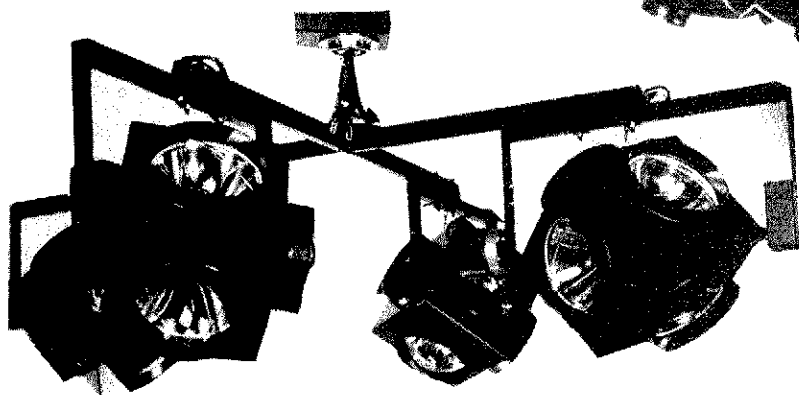
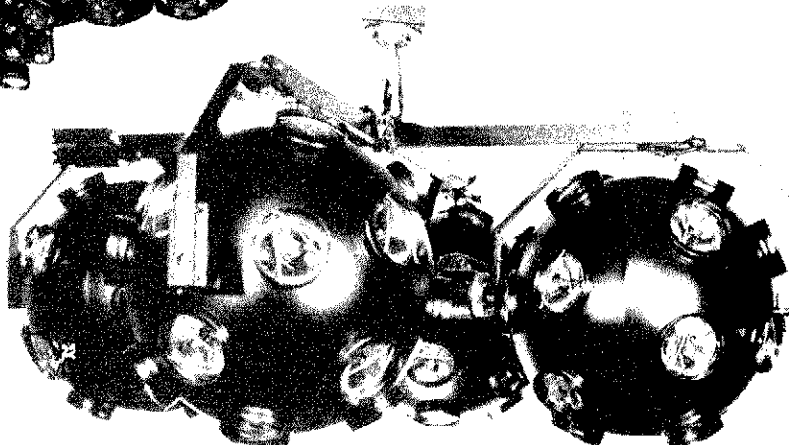
# «QUADRUPPLICITY!»



◀ **QUAD HARVESTER**

**QUAD COSMOS BALL** ▶

**QUAD DICE CUBE**



*"The new "Mega powerful"  
quad units from Kremesa can  
stun the largest venue with  
another light dimension!"*

Each unit has individual lamp feeds making it possible to run the lamps from a four channel controller for a more subtle effect, and all the units incorporate Kremesa's latest in-house technical developments for maximum reliability, efficiency and safety. Two examples: all top motors have secondary suspension in the form of a safety chain, which is approved by all local authorities; mains earth continuity is maintained on all metal parts, meeting electrical regulations worldwide.

The Quad Dice Cube uses another new development from Kremesa, a replacement for the Marine Searchlight PAR56 4545 lamp, which they call the Parabola. This uses a user replaceable 12v 100w quartz lamp in a specially developed reflector, which has a glass front for trouble free fitting of colour filters, and gives a dramatic increase in light output. Lamp replacement costs are less, with a 2000 hour lamp life being another dramatic improvement on the 4545! The Parabola lamp unit is now supplied with new Kremesa units formerly using 4545 lamp, and is also available separately.



AVITEC Electronics (UK) Ltd., 80/81 Walsworth Road, Hitchin, Herts SG4 9SX, England. Tel: Hitchin (0462) 58961. Tlx: 825682 AVITEC G.  
AVITEC + SONDOCK, Köln 30, W.Germany. AVITEC BV, Tilburg, Holland. AVITECH AG, Niedergösgen, Switzerland.  
The AVITEC Group – Europe's largest club lighting and sound equipment distributors.

# SIB Rimini 86

—“not to be missed”

The 4th SIB International Exhibition of Equipment and Technology for discotheques and dance-halls is being held in the Rimini Trade Fair from May 6-9.

Just how the Italian show ticks and the reasons behind its incredible success, having in just 3 years become one of the trade's most important international meeting points, was explained by Mauro Malfatti, one of the Rimini Trade Fair directors, in London at last September's PLASA show when SIB 86 was presented to members of the UK trade.

“When we decided to organise the first edition of SIB, we did so convinced that the sector's world trade lacked a really comprehensive international show dedicated exclusively to the disco and club equipment industry. The solution offered by other such events was in some cases merely a show within a show, or an exhibition open to the general public, and in both these situations exhibitors do not have the certainty that all visitors are potential customers, as is the case with SIB.”

This theory has been confirmed each year as SIB has grown to become one of the major events in the disco trade calendar. The attendance figures speak for themselves: the more than satisfactory total of 147 exhibiting companies at the initial show rose to 228 in 1984, and last year there were no less than 300.

As well as all the top Italian manufacturers, a hefty 40% of this total consisted of companies from all the other major manufacturing countries, with the U.K., France, U.S.A., Japan, Germany, Spain and Holland particularly well represented.

Visitors' attendance figures followed the same upward curve, passing the 10,000 mark last year, and the fact that almost 1500 were non-Italian visitors from an impressive 32 countries all round the world confirmed the international importance of the Rimini show.



Mauro Malfatti.



Flashback to SIB Rimini in 1985, during the opening period. Man with his back to camera is Optikinetics' Neil Rice.

Rodolfo Lopes Pegna, the Rimini Trade Fair president continued: “The SIB exhibition has been such a success for a variety of reasons: most important is firstly the fact that it offers absolutely everything necessary to completely furnish, fit and equip a venue of any size, each year presenting the latest technical innovations in all sectors. Secondly, it offers all this under one roof and in an extremely professional context, with all the facilities that a really international exhibition should have—don't forget that we have over 30 years' experience of organising exhibitions!”

Coming up to the present day, the SIB 86 show is setting up to be even bigger and better than last year, with the 18,000 sq.m. of stand space almost sold out and numerous applications still coming in. The show is organised by the Rimini Trade Fair Corporation with the collaboration of the SILB (Italian Dance-hall Owners' Syndicate), which also has an important role in planning the busy programme of collateral events: technical seminars, debates, shows, etc.

An extremely important “first” this year is the fact that concurrently with SIB, the Rimini Fair Centre's recently inaugurated new 8,000 sq.m. pavilion is hosting the first edition of the MAGIS exhibition of theatre and cinema equipment. This important exhibition is being organized with the collaboration of the Italian General Show Business Association, one of the Industry's most influential representative bodies. Official participation at this show has been confirmed by U.N.I.C. (International Cinema Union) of which the cinema workers' associations of 14 countries are members.

The exhibitors at the MAGIS show will be the leading manufacturers in the equipment and furnishing field for the theatre and cinema industries, and they will be exhibiting the very latest technical innovations that this specialised sector has to offer.

The MAGIS exhibition, plus the CONGREX exhibition of equipment for the organisation of conferences, also being held at the Rimini Trade Fair from May 6-9 (in yet another of the centre's independent but inter-connected pavilions), will offer trade visitors the unprecedented opportunity of killing 3 birds with one stone, as some of the equipment on show at these exhibitions will doubtless have many potential customers in common, par-



Rodolfo Lopes Pegna.

ticularly in the light and sound sectors.

SIB's trade sectors, as Lopes Pegna explained, run literally the entire gamut of equipment and furnishing for in-club use: from lighting to air conditioning; sound amplification to fireproof and flame-retardant material fabrics; not to mention video, furnishing and a particularly strong point in the Italian trade, lighting effects.

Visitors and exhibitors at Rimini can rest assured that they will be able to do business with all the necessary facilities which make things run as smoothly as possible. These include a trade visitors' lounge with free inter-

preter service, general information desk, banking facilities, press room, and office services such as telex, telephone exchange and zerox. There is also a travel agency to help the many visitors who plan a holiday round their Rimini trip, with air and rail tickets, car hire, hotel reservations and excursions.

This year there is a particularly strong contingent going out from the U.K., as well as an entire sector of the show booked by a Spanish delegation which includes Satel, Kremsa, Kreluz, Ecler, Das, and A.E.Q.

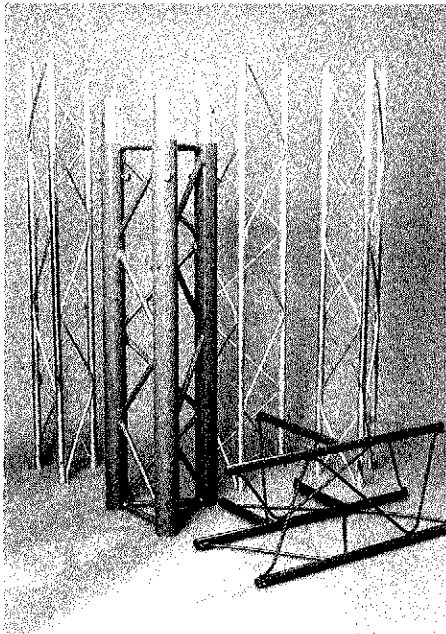
And it should not be forgotten that Rimini is first and foremost a holiday resort—the

most important on the Adriatic coast—and there is no lack of accommodation or night life. The city is easily reached from any part of Europe: air travellers flying into Bologna (Rimini is only open to charter traffic) which is just an hour away by train or motorway, and a Bologna-Rimini bus service has been mooted for this year. There are also regular trains from both Milan and Rome.

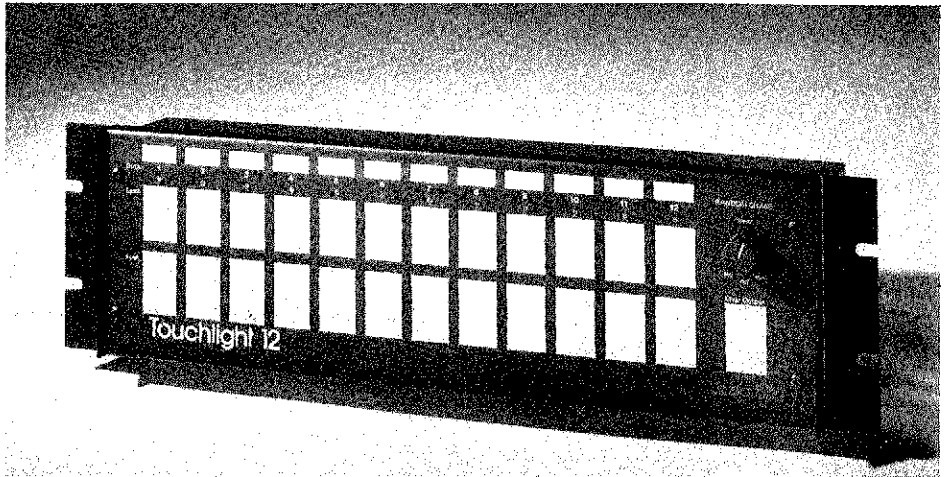
With all these points in its favour, Rimini is definitely not to be missed this year, offering as it does a professional preview of the industry's latest innovations in the idyllic surroundings of the Adriatic Riviera.

## British Flag Carriers at Rimini

Lighting Leisure Marketing Limited and Lightning Designs, both Astralloy Group Companies, will be demonstrating the versatility of their lighting and staging systems on stand number 68/87 at SIB Rimini. Astralite, Structuralite and Minilite are the Astralloy Group's three frame products, and some of the recent developments in moving lighting rigs and computer controlled modular systems will be on display on their stand.



Astralloy's trio of frame products will all be on show at SIB Rimini.



Zero 88's new Touchlight 12.

Also on the Astralloy stand **RED Professional Sound** will be exhibiting their complete range of active loudspeakers. On show on RED's own stand will be the new R500A, which is a 500w self-contained system designed for live music use and larger club installations. To complement the loudspeaker range will also be a range of accessories designed for versatility either for the fixed installation or the mobile user.

Touchlight 12, latest addition to the family, will lead the parade of products on **Zero 88's** stand. The Sigma switching pack and the Delta dimming pack will also be in the foreground.

**Optikinetics** will have its own large stand constructed from Trilite (what else?) and feature their latest new product development—in conjunction with **Mode Electronics**.

Following their success at the recent ABTT Trade Show, **Pancan** will have their complete product range on show at Rimini. **Le Maitre** also follow on

their ABTT success with an encore at SIB, showing their latest in smoke effects and pyrotechnic products, with the aid of a video show.

**Mushroom Lighting** will show the full range of Felstar products including the Starcan 1000 and Satr Module 8P. They will also show **Slick Systems'** heavy duty lighting suspension system.

**Light Processor** will have a new version of their popular 436 controller, the Commander, and this will be launched at the Show. They will also be launching a new power pack to link with the 436.

**Ice Electrics** will be showing a range of new products including the Super Starflash Strobe, Jaguar II, Mix 8080, Concorde, Interceptor II, and the new style mix 2020 and Harrier.

**Anytronics** will be concentrating on their power packs, and due for launch at Rimini are four channel dimmable power pack and a six channel version of their PP405 switchable power pack.

**FOR DETAILS OF  
ADVERTISING RATES FOR  
LIGHTING SOUND  
International**

Ring Ann Holland  
on 0323 645871

Or write to: John Offord Publications,  
12 The Avenue, Eastbourne, East Sussex BN21 3YA.  
Telephone: Eastbourne 0323 645871



**Sound Hire • Drapes Hire  
Pyrotechnic Sales**

**Phone for a FREE Catalogue**

**Manchester Leeds Birmingham London**  
061-793 5848 0532 461148 021-328 1591 01-965 8188

# SHOW PAGE *with PLASA News*

## Show Season

When you read this edition of **L+SI** the big Paris show, SIEL 86, incorporating the first Theater Fair, will be over, and exhibitors will be packing their crates in readiness for SIB in Rimini (see feature). Exactly a week after that, from May 13-15, Showtech '86 makes its second appearance at AMK Berlin.

These are all big shows, and international in appeal—each adding an extra dimension this year in the form of a new or expanded section, new links with associations, or the attraction of a major conference as at Showtech.

Back in the UK, the first Scottish Club Pub and Catering Show takes place at the new Scottish Exhibition and Conference Centre in Glasgow, and like its Blackpool counterpart will feature a major Sound and Light Spectacular. Organised by Iain Macfarlane Exhibitions, "full house" situation for all stand space was reported in late March.

Sponsored by Bezique, participating companies in the Sound and Light Spectacular will include Bose, Citronic, G.E. Lamps, Laser Systems, Le Maitre, Light Engineering, Manhattan Sound and Light, Mode Electronics, Night Flight, Optikinetics, Pulsar, S.A.V., SIS and Satel amongst others.

Once all this batch of activity is over, our own PLASA Show gives you no chance of a long summer break, opening its doors at Nototel in Hammersmith on August 31st. It runs until September 3rd. Organiser David Street reported at the last PLASA committee meeting that all stand space had already been sold out, with a waiting list expected. Discussions are currently taking place with the hotel to assess whether any further space can be procured.

And it will be interesting to watch and see how big, and how international the PLASA show will become over the years. The rate of expansion, coupled with the poor assortment of flexible London venues available,

makes it a very difficult project to assess and plan for, and it will pose an ever present problem for the committee to grapple with in the future.

## Dozen New Members

Twelve new members were admitted to the PLASA ranks at the March committee meeting: Fantasia Sound and Lighting, Slick Systems, Mushroom Lighting, Wharfedale Limited, Formtronic, Starlight Design, Turbosound, Dial Design, TEC, Scott Sound Systems, I.L.P. and M.J.L. They are all included in the newly amended List of Members at the back of the magazine.

## APIAD Welcome

The Italian Association of Discotheque and Theatre Equipment Producers has asked us to invite anyone interested in linking up with Italian equipment manufacturers to visit their stand at SIB Rimini where they will receive full assistance. APIAD is based at 3, via Solferino, 20121 Milan, Italy.

## Exhibition Diary

### SIEL 86

April 12-16, 1986.  
Porte de Versailles, Paris.  
Bernard Becker Promotion,  
161 Boulevard Lefebvre, 75025, Paris.  
Telephone: (14) 533 74 50.

### NAB (National Association of Broadcasters)

April 13-16, 1986.  
Dallas.  
Director: L. Gayou.  
230 South Beniston, Suite 910/912, St. Louis,  
Missouri 63105.  
Telephone: (314) 721 7717.

### Audio Visual 86

April 14-17, 1986.  
Wembley Conference Centre, London.  
EMAP/MacLaren Exhibitions Ltd.  
PO Box 138, Token House, 79-81 High Street,  
Croydon CR9 3SS. Telephone: 01-688 7788.

### EXPOMUSICA 86

April 22-26, 1986  
Madrid.  
Organised by: IFEMA (Institucion Ferial de Madrid).  
Avda de Portugal, s/n Casa de Campo, 28011  
Madrid 11011.  
Telephone: (91) 470 10 14.

### SIB Rimini

May 6-9, 1986.  
Rimini, Italy.  
Ente Autonomo Fiera Di Rimini,  
PO Box 300, 47037 Rimini, Italy.  
Telephone: 0541/773553.  
UK enquiries: Disco & Club Trade International.  
Telephone: 01-278 3591.

### Lighting World 4

May 11-13, 1986.  
Los Angeles, California.  
Robert Weissman, National Expositions Company  
Inc., 14 West 40 Street, New York NY10018 USA.

### Showtech 86

May 13-15, 1986.  
ICC - Berlin.  
UK enquiries: Spectrum Communications Ltd.,  
183-185 Askew Road, London W12 9AX.  
Telephone: 01-749 3061.

### Scottish Pub, Club and Leisure Show

June 3-5, 1986.  
The Scottish Conference and Exhibition Centre,  
Glasgow.  
Iain Macfarlane Exhibitions Ltd., 15 Elm Grove,  
Didsbury, Manchester M20 0RL.  
Telephone: 061-434 5300/0050.

### NAMM Exposition

June 14-17, 1986.  
California, USA.  
John Vincent, Director ExPo's & Markets.  
5140 Avenida Encinas, Carlsbad,  
California CA92 008. Telephone: 619 438 8001.

### 1986 Music and Sound Expo

June 14-17, 1986. Chicago.

Director: John Vincent.  
National Association of Music Merchants,  
5140 Avenida Encinas, Carlsbad,  
California, 92008.  
Telephone: (619) 438/8001.

### PLASA Light and Sound Show

August 31 - September 3, 1986.  
Novotel, London.  
Enquiries: (exhibition bookings) David Street.  
Telephone: 01-994 6477.  
Enquiries: (general) PLASA secretariat, c/o Roger  
Saunders, 1 West Ruislip Station, Ruislip,  
Middlesex.  
Telephone: (0895) 630718.

### Sonimag 86

September 15-21, 1986.  
Barcelona, Spain.  
Feria De Barcelona, Avda. Reina M.<sup>a</sup> Cristina,  
08004 Barcelona.  
Telephone: (93) 223 31 01.

### Photokina

September 3-9, 1986.  
Cologne, West Germany.  
UK Representative: Tony Pittman.  
12/13 Suffolk Street, London SW1Y 4HG.  
Telephone: 01-930 7251.  
All UK BPEG and PLASA enquiries to:  
Roger Saunders, 1 West Ruislip Station,  
Ruislip, Middlesex.  
Telephone: (0895) 630718.

### National Club, Pub, Hotel + Catering Show

October 7-9, 1986.  
G-Mex, Manchester.  
Iain Macfarlane Exhibitions Ltd., 15 Elm Grove,  
Didsbury, Manchester M20 0RL.  
Telephone: 061-434 5300/0050.

### Discotec/Hogatec

November 24-28, 1986.  
Dusseldorf Messe, West Germany.  
Dusseldorf Trade Fairs, 6 Albemarle Street,  
London W1X 3HF.  
Telephone: 01-493 3893.

To advertise in  
**LIGHTING + SOUND  
INTERNATIONAL**  
ring Ann Holland  
on (0323) 645871

John Offord talks to PLASA General Secretary

## Roger Saunders

PLASA's general secretary Roger Saunders' roots as a professional trade association administrator go back to his 5-year stay with Pete Marwick Mitchell in the late sixties. He gained unique experience in their Trade Association Administration Department before setting up his own operation on a part-time basis in the early seventies, whilst taking a degree course in Brunel University as a mature student.

He followed up by completing his Ph.D. at the University of California in Los Angeles in 1974 before commencing full-time development of his present business. Over the period from his university days to date he has seen his staff grow from 3 to 14, and his involvement with associations from 3 to 7. And alongside that, the associations he looks after have also multiplied in size.

The Master Photographers Association, for instance, had only 200 members when he took over its organisation, and was third in the UK league of photographic trade associations. "Now it's the biggest of its kind in the world," he told me. "My personal speciality is in the building of associations—if I'm given a free hand—and not perhaps in the actual running of them."

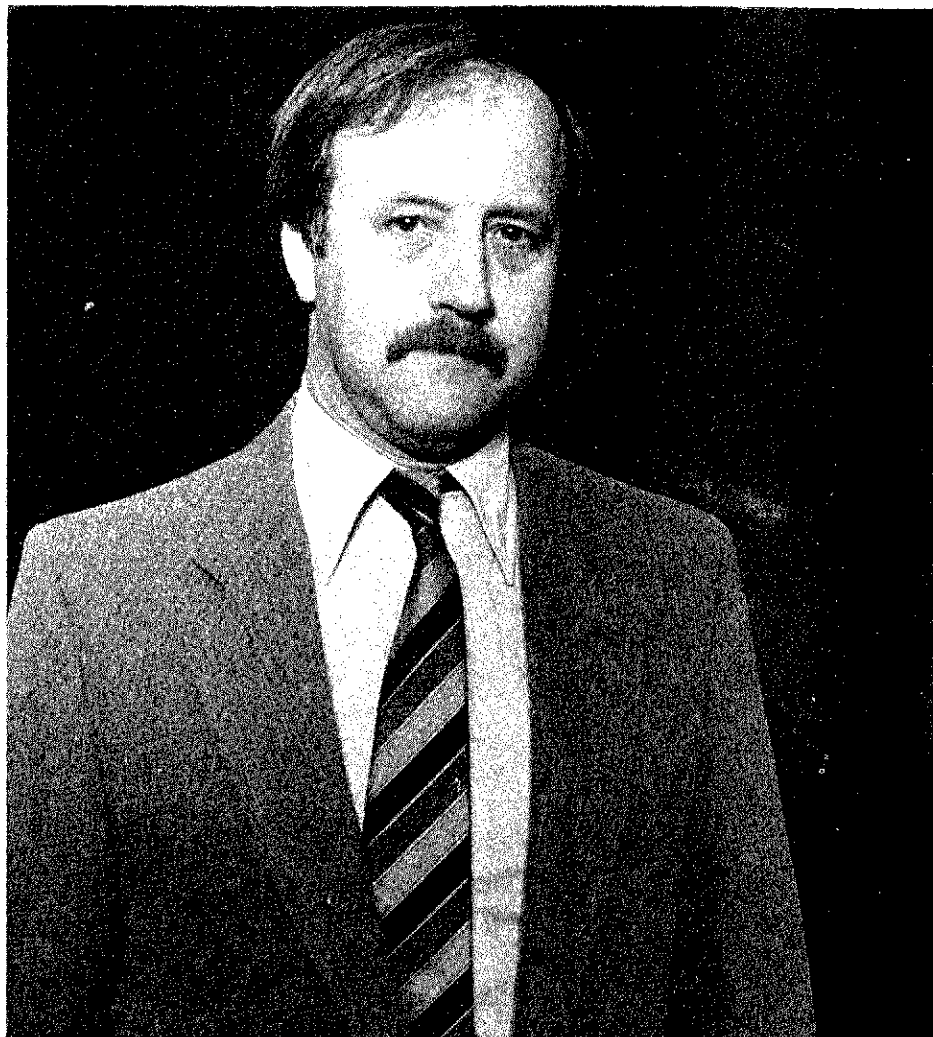
Roger Saunders' business also incorporates a travel agency, company doctoring, and a small publishing operation. As far as the seven trade associations he runs are concerned, there is no commonality—apart from the fact that they all share the need for an efficient data-base. Here, his knowledge of computer data-base systems is second to none, and "like most people" he's now well into his second computer system, with hard disk storage, and terminals on all 14 work stations in his Ruislip offices.

Another useful business link is the fact that most associations thrive on the availability of an efficient travel service, and the ability to back up overseas trade delegations, for instance, with a package of air flights and hotels is a distinct advantage to all concerned.

The man who provided the original link between Roger Saunders and PLASA was Dennis Eynon (Malham Man in our February issue). "For which I'm eternally grateful, and to whom I have to keep feeding double whiskeys!"

"It's obviously taken some time to get into the industry, and it's also obvious there are too many organisations. My brief is to 'build PLASA'," he says. He is also of the opinion that some trade associations will go to the wall. "One thousand trade associations have gone out of business in the last two years. It will be a trial of strength."

Three of the five targets he felt PLASA ought to achieve have already come about:



Roger Saunders.

the Association runs the leading UK exhibition for the industry; it has its own associated magazine; and its financial base is very strong. The remaining two he knows need continuing work on.

"The image of the Association has to be improved and radically developed and more services are required for the membership. Things are happening, but not fast enough to please me," he said. "But perhaps that's a good thing anyway, particularly in these early days." In any event, his personal target is to try and get PLASA's membership numbers doubled by the end of 1986—and looking at the latest crop of new members announced in this issue, that ambition looks like being realised.

Roger Saunders' particular strength for PLASA, which has developed out of his work for other trade associations, is his in-depth knowledge of arranging overseas trade missions.

"It comes out of an ability to recognise the problems of selling, and the importance of the need to meet the right people, and not the time wasters," he explained. Linking up with the chambers of commerce, shipping companies, merchant banks, and knowing the routines on embassy cocktail parties are all part of the game. "Coupled with government grants, trade missions are the best way I know of selling into a new country". Local embassy and consulate officials can often arrange appointments with appropriate agents lined up on a regular half-hour basis, and Roger Saunders' personal philosophy of "never taking no for an answer" he insists gets results.

His view on PLASA is that "its potential is tremendous, but what concerns me somewhat is that it is not outward-looking enough to develop". And he reminded me: "The first one in wins."

John Offord

# EQUIPMENT *News*

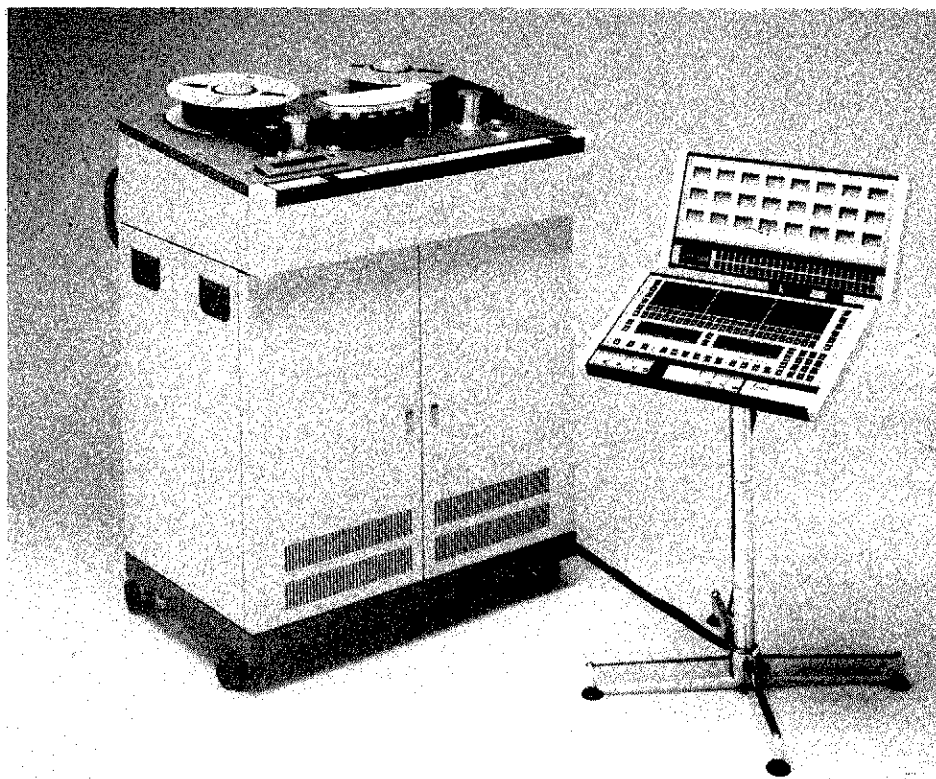
## Soundcraft Saturn

The AES Convention in Montreux saw the launch of the newest and most advanced analogue multitrack tape machine, from Soundcraft Magnetics.

The Soundcraft Saturn is the result of three years of intensive research and development, and exploits the fullest potential of digital control technology. All aspects of recorder design have been methodically analysed to produce the machine. No expense has been spared, to ensure the highest technical performance, solid reliability and serviceable accessibility, say Soundcraft. Perhaps the most remarkable feature is the Total Remote unit. Micro processor technology has now made it possible to align the signal electronics by simply pushing buttons, and in addition the alignments may be stored in a memory for later recall.

Saturn goes still further and offers the option of removing this facility from the machine on the Total Remote unit. The addition of a full set of VU meters in the same unit gives Total Remote control of the signal electronics alignment. The autolocator controlling the transport is a standard feature which contains four programmable function keys. These keys not only permit the storage of commonly used complex transport function sequences, but monitor switching may also be included.

For full details contact Soundcraft Electronics Ltd., Unit 2, Borehamwood Industrial Park, Rowley Lane, Borehamwood, Herts. WD6 5PZ, telephone 01-207 5050, telex 21198 (SCRAFT G).



Saturn—the newest and most advanced analogue Multitrack Tape Machine from Soundcraft Magnetics.

## ICE Super Starflash Strobe

After several years of manufacturing and marketing one of the industry's most popular strobes, the Starflash, ICElectrics have just launched their Super Starflash Strobe.

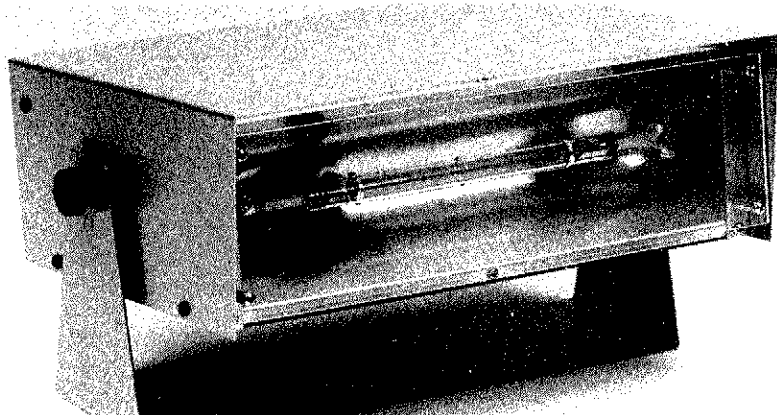
It utilises a linear tube specially commissioned by Ice. Light output is extremely high, and the reflector is designed for maximum efficiency. Triggering of the Strobe can be effected by means of its own timing circuit, or from electrical pulses. A special delayed output socket is incorporated, allowing several Super Starflash Strobes to be linked together to give an automatic sequence whenever the first one is triggered. All that is required for a controlled strobe sequence is the first pulse from any source such as a touch panel. (The

ICE Starflash Strobe now also incorporates automatic delay pulse output to enable strobe sequences without controllers).

If an external trigger source is used to fire the Super Starflash Strobe (the ICE Dual Strobe Trigger is an ideal remote controller), all that is required is for the remote cable to be plugged into the input socket on the back of the Super Starflash. This will automatically switch off the Strobe's own timing circuit.

Finished in silver grey, the unit has a swivel base that doubles up as a hanging bracket. It comes with a clear filter, but colour filters may be fitted by means of four screws at the front of the strobe.

For full details contact Icelectrics Limited, 131/132 Blackdown Rural Industries, Haste Hill, Haslemere, Surrey GU27 3AY telephone (0428) 2015.



The ICE Super Starflash Strobe.

## New Audioscope Audio Level Display Unit

With the addition of an RGB colour or monochrome monitor, up to 32 channels of audio or DC levels can be displayed in bargraph form using the new Audioscope Model 3211 Mk2 multi-channel Audio Level Display Unit.

Seven VU and PPM scales are available including 1 to 7 scaling for the BBC specification PPM as well as various DIN standards, with or without secondary gratitudes. The ballistics may be switched between VU and PPM on the front panel or remotely via a connector at the rear of the unit. Up to four different integration time constants are possible conforming to DIN and IEC specifications. Additionally, should an extra fast integration time be required, say, for displaying audio for digital recording, the unit may be modified accordingly.

Sixteen different sets of graphics are selectable within the unit to indicate channel groups, sub-masters, L & R masters, echo sends, etc, which optionally may be remotely switched. For special applications custom graphics are also possible. Bars may be adjusted for width when only a small number of channels are required in order to fill the display.

The audio inputs are electronically balanced and are terminated on two 16 way D Type connectors at the rear of the unit. Input sensitivity for OdB reading may be selected in steps from OdB to +9dB with a maximum input level of +24dBm. The bar colour transition point may be altered to suit individual requirements, ie. OdB or +4dB, etc.

Another feature is the ability to remotely switch on a coloured square at the top of each colour bar independently. This facility is useful for indicating, for example, the record mode of that channel

when the unit is used with a multitrack tape machine. Alternatively, the square may be 'extended' and superimposed on a portion of the colour bar, say between -10dB and 0dB to indicate a safe operating 'window'. This may be switched on or off collectively from the front panel or remotely.

Scales, graphics, signal bars, graticules and secondary graticules are all independently programmable for a wide range of colours.

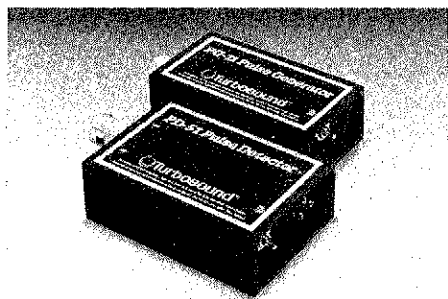
In view of the versatility of this new unit, many applications are possible both for the audio and industrial markets. The most obvious uses are for multitrack recording, broadcast output and off-air level monitoring, theatre and PA level monitoring and cassette duplication. For industrial uses, with the addition of suitable transducers and interfaces, indication or measurement of liquid levels, pressures, temperatures, etc, are possible.

For full details contact Michael Stevens and Partners, Invicta Works, Elliott Road, Bromley, Kent BR2 9NT, telephone: 01-460 7299.

## Turbosound Phase Checker

A new, two-piece, pocket-sized phase checker system has been introduced by Turbosound Sales Ltd.

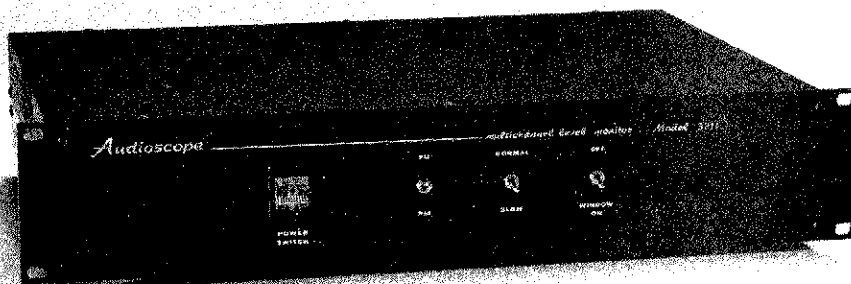
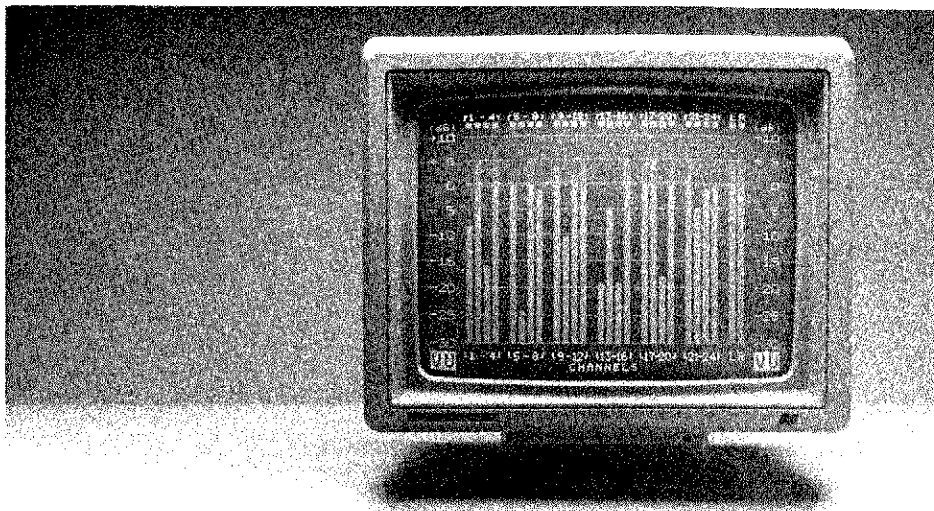
Designated the TPC-1151 Phase Checker Set, and comprising two units, the PG-11 pulse generator and the PD-51 pulse detector, they are designed for use in the alignment of multiple loudspeaker enclosure arrays. In addition, the set may be used for a wide variety of audio testing functions including electronic polarity, continuity of cables, locating lines in multi-conductor snake systems, and verifying signal flow through other components in the audio signal path.



The Turbosound TPC-1151 Phase Checker Set comprises the PG-11 Pulse Generator, and the PD-51 Pulse Detector.

The PG-11 is a full-range pulse generator, fitted with a customised extended male XLR connector which can be plugged directly into a power amplifier, electronic crossover, or mixing desk.

The PD-51 pulse detector is a rugged hand-held unit provided with both a condenser mic for measuring acoustic phase, and a female XLR connector for determining electronic polarity. Green and red LEDs indicate in-phase or out-of-phase (negative polarity) conditions. The circuit design



The Audioscope Model 3211 Mk2 multi-channel audio level display unit.

of the IPC-1151 enables far more accurate and consistent readings of acoustic phase and polarity than previously available from devices of this type, say Turbosound. Both units have a durable anodized finish.

For full details contact Turbosound Sales Ltd., 202-208 New North Road, London N1 7BL, telephone: 01-226 0099, telex: 265612.

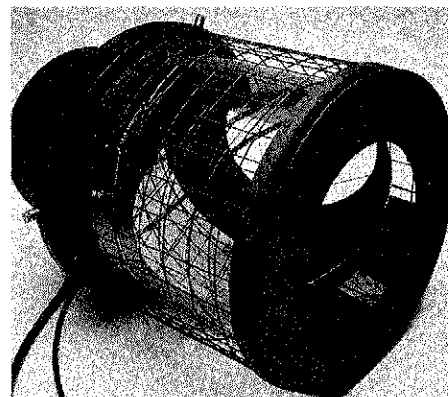
## Pancan—the Driving Light

Launched in 1981, Pancan's driven light system, based on the principle of moving the light beam rather than the luminaire (by a patented system of moving mirrors) is now well and truly tried and tested, and includes a full range of systems and accessories. From a practical point of view, the system has inherent advantages. With a mirror weighing only a few grams rather than a luminaire weighing several kilos it offers greater precision and speed—and it doesn't reduce bulb life by constantly moving the bulb about.

The latest line of Pancan products introduced by the company is based on the Servo System 3, originally shown at the last PLASA Show, and more recently at Frankfurt and the ABTT Trade Show. Since its launch the company say response has been more than enthusiastic, and it offers a full range of driven light and colour change at a

very reasonable price. For well under £500, a small nightclub can buy the kind of light show usually associated with big concerts, and a price tag of four times as much.

Many operations have sufficient spare channels on their existing controllers to allow the addition



Pancan Servo System 3.

of a small System 3 rig, but for larger systems the Pancan Touchstone Lighting Control board has been developed, and this was launched at the ABTT Trade Show at Riverside Studios last month.

The faders on the new control are grouped in sets of four to make it easy to control System 3 driven light. It is also the easiest of boards to learn and operate say Pancan, and its compact size makes it ideal for touring. At under £1500 "it is the cheapest way to get 96 channels with 99 presets and sequences, dipless crossfade, automatic sequence and chase, 96 soft-patch configurations with instant re-patch for any sequence and soft-patching of any control channel to any output channel, either individually or in groups," say the company. It also gives pre-programmed and live control with auto-crossfade and dwell. The three-year lithium-supported CMOS memory means sequences can be stored internally.

FOR ALL THEATRICAL PRODUCTIONS

**STAGE LIGHTING & EQUIPMENT**

FULL RANGE OF LAMPS, CINEMOID & SPECIAL EFFECTS FOR HIRE and FOR SALE.

**FUTURIST THEATRICAL HIRE LTD**

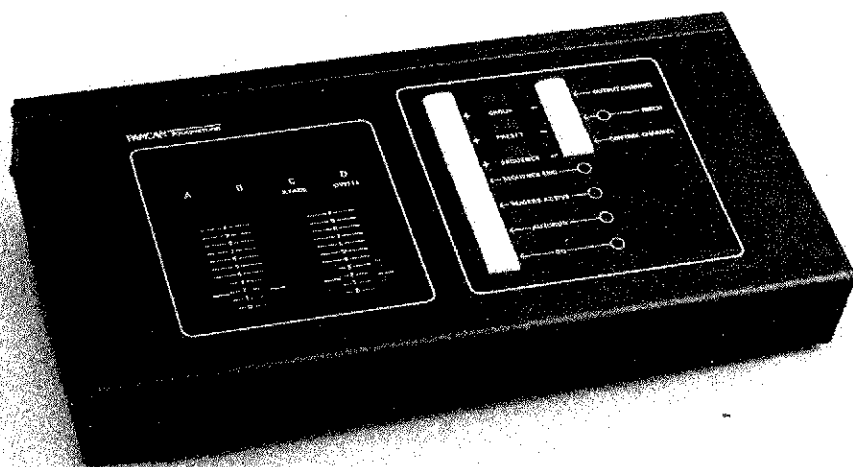
HOYLE HEAD MILLS, NEW ST. EARLSHEATON, DEWSBURY, W YORKS WF12 8JJ

Tel: (0924) 468183

**Strand Lighting**  
Main Dealer and Service Agent







The new Pancan Touchstone lighting control.

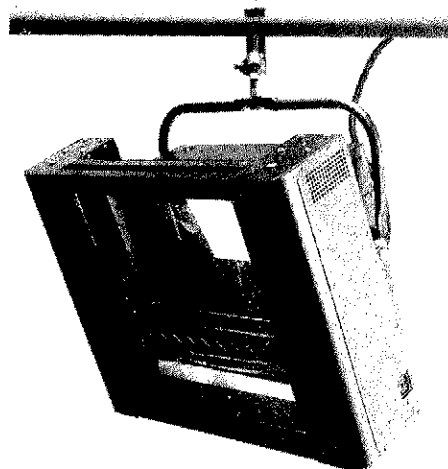
The **Pancan Iris** adds another facility to the System 3 range. Like System 3 it can be controlled from any lighting board and uses all memory, chase and other features of particular boards. The speed of opening, closing, and amount of closure can be controlled and pre-programmed to work in conjunction with colour change and beam movement. The Pancan Iris has to be made for each type of luminaire, so prices vary around £300.

When you add to all this the joy-stick controlled Direct System 1, the memory System 2 Plus, with its accuracy of one-fifth of a degree, the System 2 Laser Head and the Touchstone Tigers Eye lighting board, Pancan say they offer a greater range of driven light than any other company coupled with the claim that "there are more Pancans in operation than any other system, making us the leading driven light company in the world."

For full details of all products contact Pancan at 25 Powis Terrace, London W11 1JJ, telephone 01-221 1455.

## Strand Lighting's Showchangers

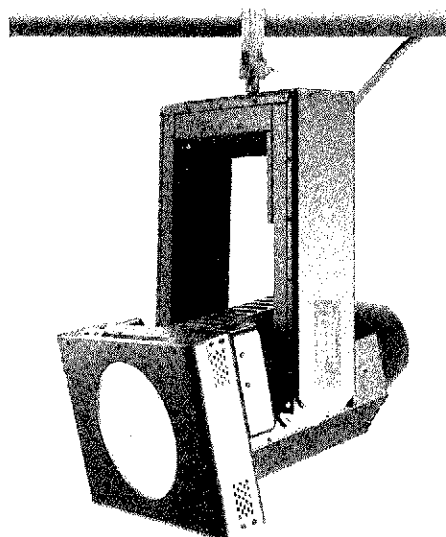
The new ShowChanger product line from Strand Lighting was pre-viewed simultaneously at the ABTT Trade Show in London and at the USITT



Iris Scroller—scrolling colour change unit providing up to ten colours for the Quartzcolour Iris 1 cyclight.

Show at Oakland in California in March. It includes Automated Parlites, Colour Scrolls, and Control Consoles. Products will be launched throughout 1986.

A fully automated lighting fixture, the Strand Lighting ShowChanger Automated ParLite uses a standard incandescent PAR 64 lamp for an intense beam in a variety of spreads. The unit features the ability to pan almost 360° and tilt up to 220° with repeatability and resolution of one degree on either axis. Belt driven motors allow manual override of position with no harm to the drive mechanism even while under power. Digital communication and a microprocessor in the fixture permit variable speed: the ParLite can move between any two points in less than two seconds, or it can perform a perfectly smooth sweep over a period of up to twenty seconds.



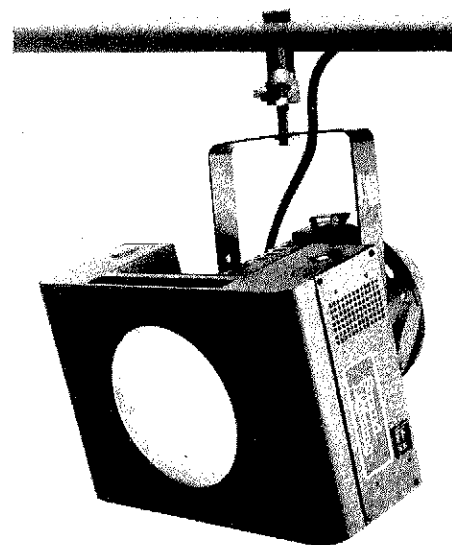
Parscan—Par 64 unit with variable speed pan and tilt movement and integral scrolling colour change unit.

Integral to the fixture is a sixteen frame scroll type colour changer capable of running end to end in less than 2.5 seconds and frame to frame almost instantly. Most importantly, the designer, not the instrument, chooses the colours. The ShowChanger Automated ParLite is a versatile fixture, useful for concert lighting, video production and multiple use facilities.

The ShowChanger Colour Scroll accessory is designed to fit a wide variety of Strand Lighting

and QuartzColour lantern fixtures as well as a selection of competitive equipment. Colour changers can provide enormous variety for a limited number of fixtures and reduce the overall number of instruments necessary: a single Iris cyclight can provide up to ten colours rather than three or four light units with primary colours for time consuming colour blending.

The ShowChanger Colour Scroll provides the designer a palette of ten colours in 2.5 seconds or a cascade from one colour to the next over a twenty second period. Because the designer chooses the colours, accurate colour matching between units is assured. Positional accuracy is ensured by an optical sensor which reads the selected frame number rather than relying on counting from a start position. Dual motor drives accommodate variations in colour media tautness and thickness as well as adjusting individually for roller speed.



PAR Scroller—compact, scrolling colour change system for a Par 64 unit, which offers a choice of up to ten colours.

The ShowChanger Briefcase Console provides control for all automated functions in a compact portable memory system. Up to 100 recorded presets can contain position, speed and colour information for up to 99 channels, while the ShowChanger flexible distribution system allows each channel to control any number of Automated Parlites and Colour Scrolls. LED displays indicating preset number, next preset, channel number and speed provide ease of operation. Additionally, a series of presets may be programmed to chase in a specified sequence.

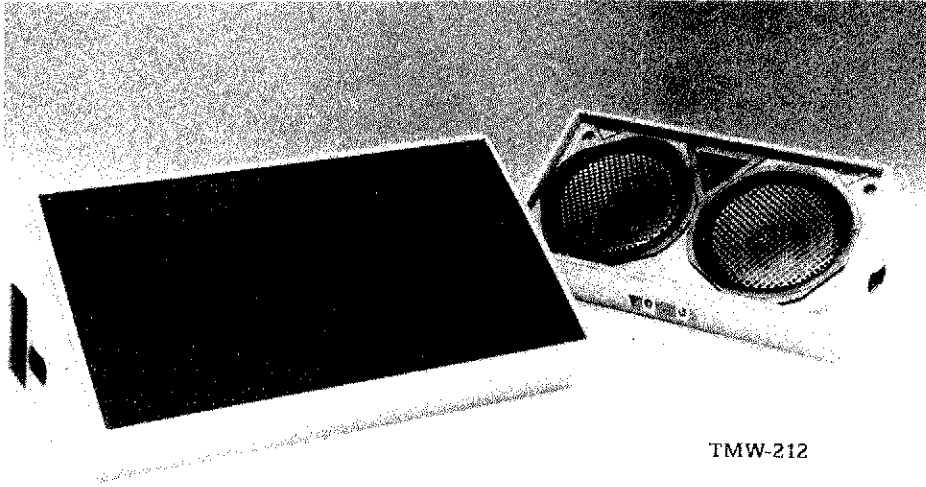
For full details contact Rank Strand Limited, P.O. Box 51, Great West Road, Brentford, Middlesex TW8 9HR telephone 01-568 9222.

## Turbosound go Low Profile

One of the major problems shared by live-sound engineers, theatre technicians and technical directors in the television and video industry has always been how to provide powerful, high quality on-stage sound, without obstructing audience or camera sight-lines.

Now Turbosound Sales Ltd. feel that the introduction of their TMW Series of low-profile floor monitors goes a long way towards providing a solution to these and other problems previously associated with the provision of a stage monitor set-up.

Engineered in line with the company's well known design parameters of providing high



TMW-215

TMW-212

**The TMW-215 and 212 low profile floor monitors.**

power and quality from the smallest possible enclosures, the TMW Series consists initially of two complimentary units, the TMW-212 and TMW-215. Both are ruggedly built from Finnish Birch Ply, featuring kick-proof speaker grilles and full-width reticulated foam covers.

The TMW-212 incorporates two 12" drivers and a 1" compression driver loaded with a unique, triangular, inert resin horn. Frequency response is quoted as 110Hz-17KHz at +/- 3dB with a peak SPL of 127 dB. This extremely compact enclosure has a power handling of 300 watts RMS with the

built-in optimised passive crossover network, allowing the unit to produce a natural sound balance.

The TMW-215, designed along similar lines, is a switchable passive/active unit incorporating two 15" drivers and a 2" high frequency compression driver. Power handling is quoted as 450 Watts RMS with a peak SPL of 133 dB. The frequency response is 90 Hz-17 KHz at +/- 3 dB.

For full details contact Turbosound Sales Limited, 202-208 New North Road, London N1 7BL telephone 01-226 0099.

**New Arc-line AL200 Control**

Recently introduced by Mode Electronics, the Arc-line Control Unit AL200 is a four zone controller offering manual zone selection and four fast-action zone chase effects. The unit is designed to operate up to 200 metres of Arc-line.

The effects include fast action strobe, including a single strobe chase along the entire chain with speeds up to 1400 miles per hour. Other effects include manual flash, latch, automatic scan, stand-by, and a sequence interval control. The system can be touch controlled using the Mode U125 touch panel or U8TP touch programme via the remote/disable unit.

Also recently introduced, to compliment the existing blue tubes, Mode have brought out an additional range of four UV fluorescent coloured polycarbonate tubes in red, green, amber and pink.

For full details of all Arc-line range products contact Mode Electronics Limited, Chelsing Lodge, Tonwell, Ware, Herts., telephone: (0920) 2121.

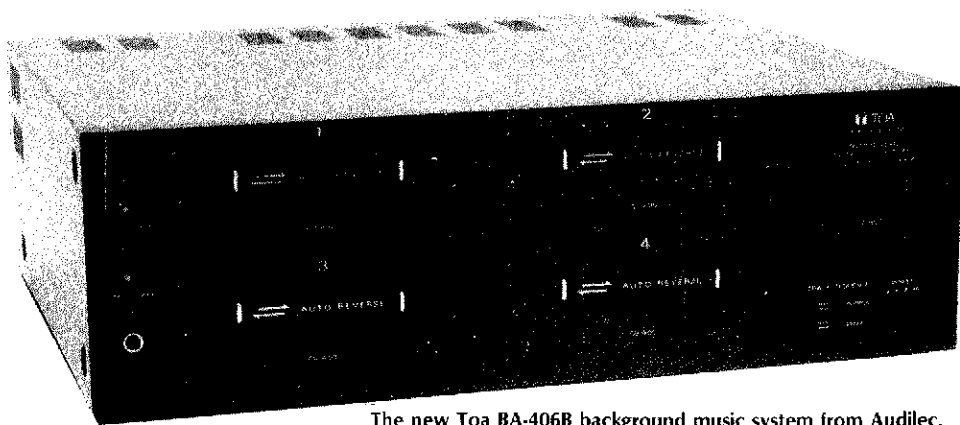


**The Mode Electronics four zone Arc-line AL200 control unit.**

**P\*NC\*N**  
**SERVO SYSTEM 3**  
**MOVES FASTER THAN A V\*R\*LITE**  
**PANS FURTHER THAN A T\*L\*SCAN**  
**SCANS A S\*PER TR\*\*P\*R AS EASILY AS A P\*R 36**  
**COSTS LESS THAN A M\*CSP\*T**  
**FOUR COLOURS & 90 MIXES**  
**CONTROLLED FROM ANY**  
**LIGHTING BOARD**

**AND .....**  
**THE NEW PANCAN TOUCHSTONE**  
**96 CHANNEL FULL MEMORY**  
**LIGHTING BOARD**  
**LIST £1485 excl.**

**PANCAN**  
25 POWIS TERRACE • LONDON W11 1JJ  
TELEPHONE 01-221 1455  
TELEX 268141 METMAC G (ATTENTION PANCAN)



The new Toa BA-406B background music system from Audilec.

## New Toa Background System

A new powerful background music system purpose designed for mid and foreground music applications, has been launched in the UK exclusively by Audilec Distribution Limited, of Southend.

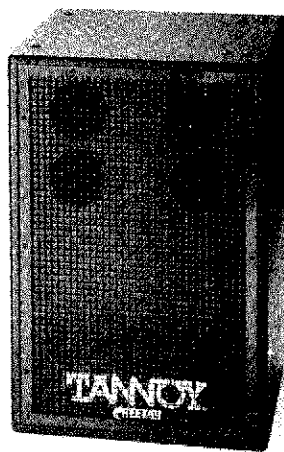
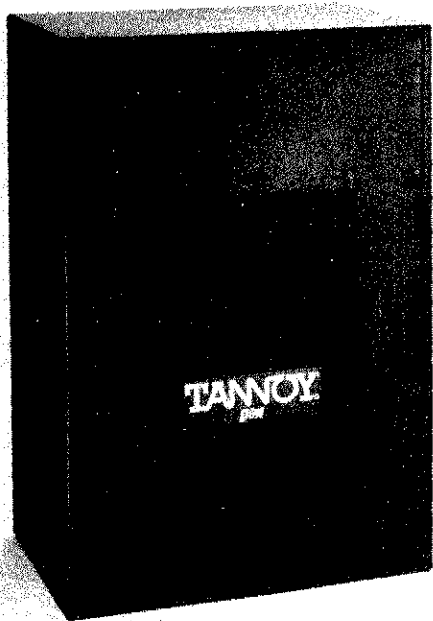
Designed by Toa Electronics Limited, the 60 watt four cassette deck BA-406B, from the same stable as Toa's highly successful BA-400, is ideal for use in hotels, restaurants, retail outlets and pubs—and wherever high quality background music is required.

A major feature of the BA-406B are individual bass and treble controls which allow tailoring of the sound to meet the demands of the listening area. In addition, the system automatically reduces BGM volume during the broadcast of messages via a microphone or spot announcement machine.

For further information contact Audilec Distribution Limited, Unit 16, Laurence Industrial Estate, Eastwoodbury Lane, Southend-on-Sea, Essex SS2 6RH, telephone (0702) 511661.

## Two New Wildcats

Launched at Frankfurt, Tannoy's Lion and Cheetah are two new bass systems which have been designed to complement their Wildcats series, helping to provide even greater flexibility to match any type of system or installation.



The Lion and Cheetah—two more "Wildcats" from Tannoy Ltd.

Both are based on the latest dual chamber, reflex loaded acoustic bandpass design technology. They offer high sensitivity and accurate frequency response over a high controlled bandwidth.

The Lion and the Cheetah both incorporate the unique feature of a passive crossover network originally introduced in the Leopard, which provides mid/high frequency take off points for single lead connection to other loudspeakers from the Wildcats range. This enables the building of larger systems without the necessity for complicated external electronics.

Both the Lion and the Cheetah are provided with M10 inserts for hanging brackets.

The Lion is a 300 litre enclosure with very high sensitivity, producing a genuine response over 48 to 80 Hz at 103 dB for 2.8v @1m. The Lion will combine with the Panther to produce a full range system capable of exceptional sound pressure levels. As with the Cheetah, the coupled technology ensures a clean acoustic roll off without recourse to power absorbing complex low pass networks.

The Cheetah has a compact enclosure of 130 litres and with a sensitivity of 95 dB for 2.8v at 1m. It is an ideal match for combining with the Lynx or Puma to provide an exceptionally compact, wide bandwidth PA System.

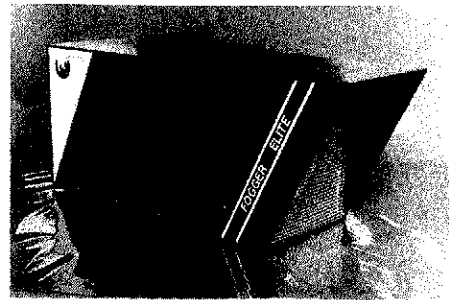
For full details contact Tannoy Ltd., The Bilton Centre, Coronation Road, Cressex Industrial Estate, High Wycombe, Buckinghamshire HP12 3SB. Telephone: (0494) 450606, Telex: 83251.

## Manhattan Launch the Fogger Elite MK II

Manhattan Sound and Light has just added the final touch to complete a six month evolution from their original Fogger Elite to the Mk II version.

The outer casing of the unit has changed from aluminium to steel, to provide a more rugged and longer-lasting case for mobile and rental work for which it has a large share of the market.

The electronics have been converted from "hard wired" to a printed circuit board, with the added feature of an interlock which allows the liquid to be pumped through the machine only when the unit is at the correct operating temperature.



Manhattan's updated Fogger Elite Mk II.

The final addition to the unit has been a change to the heating element. The new element has the ability to be cleaned on a routine maintenance basis, thus avoiding any loss of smoke output over a period of use. This also stops any major cost being involved if incorrect or contaminated liquid is used.

For full details contact Manhattan Sound and Light, Unit L1, Multi-Store, 49 Atalanta Street, London SW6. Telephone: 01-385 2487. Telex: 28905 Ref: 813.

## Soundtracs MC Monitor Console

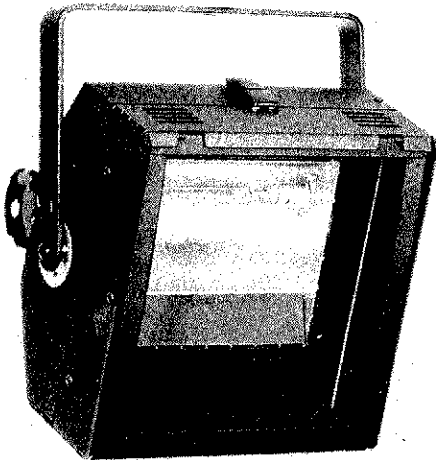
Originally announced at the Frankfurt Music Fair, full details are now available on yet another new mixer from Soundtracs. Their latest product is an addition to the very successful M Series sound reinforcement console, and has been designated the prefix MC. Designed for all monitoring applications the MC is the result of field research and development, and includes a number of unique features.

Available in two mainframe sizes 32-10+2 and 24-10+2, the features include 10 monitor outputs plus two auxiliary outputs, all with full parametric EQ and variable Q, and a variety of pre/post fade selections. Two independent auxiliary returns enable externally processed signals to be sent to the 10 monitor output channels via 100mm faders. Four band EQ with sweepable mid frequencies on the inputs along with a pre/post fade select on the monitor and auxiliary sends. All twelve sends are controlled by a 65mm linear fader and the input signal presence indicated on an adjacent LED.

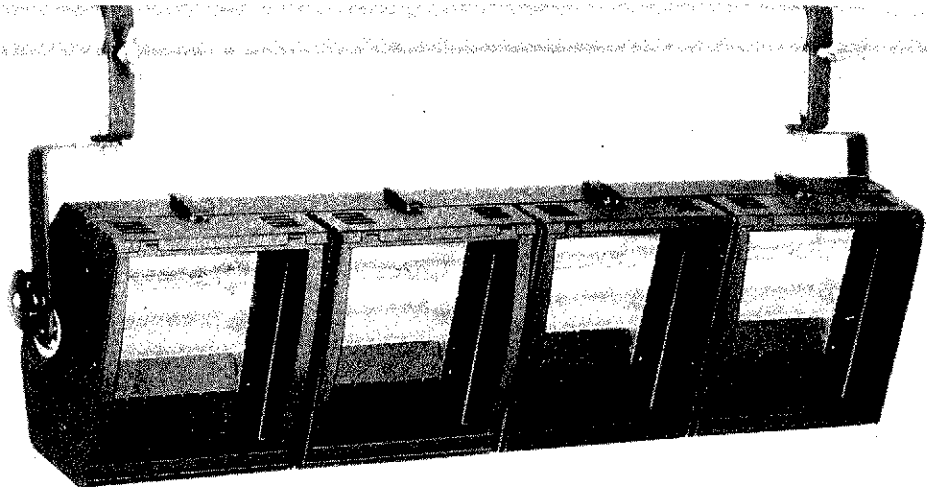
Comprehensive talk back facilities include an indicator for external communication with the front of house desk or intercom systems. Individual LED meters for monitor sends, auxiliary sends, solo, and peak indicators on each input channel when used in conjunction with the signal present indicator provide comprehensive visual monitoring.

Using proven mechanical assembly techniques the MC console is rugged enough to withstand all the vigours of the road, say Soundtracs, and is supplied complete with 19" PSU and pvc dust cover.

For full details contact Soundtracs at 91 Ewell Road, Surbiton, Surrey KT6 6AH. Telephone: 01-399 6821.



The CCT Series 2 Minuette Floodlight.



... available in single, triple and quad versions.

## CCT Latest

CCT Theatre Lighting introduced several additions to their range at the ABTT Trade Show in London and the USITT Conference and Exhibition in Oakland, California.

Of particular interest were additions to the Minuette Profile Spotlight range. CCT have developed a condenser optics chassis which can replace the standard reflector chassis. The con-

denser system offers particularly excellent gate and gobo definition. All three Minuette profiles can be supplied with the condenser system or standard reflector.

Further improvements to the ever popular Silhouette range were shown including a new 1kW basedown lamphouse with a considerably improved reflector system.

To its 1kW floodlight range, introduced last year, CCT has added a brand new 500W Minuette "Series 2" floodlight range. This will replace the popular 500W floodlight "Series 1" which CCT introduced four years ago. The new floodlight is available in single, triple and quad versions, both asymmetric and symmetric.

To meet the considerable growth in the use of

remote control colour change CCT are also introducing improved and re-styled memory colour change controls.

For full details contact CCT Theatre Lighting Limited, Windsor House, 26 Willow Lane, Mitcham, Surrey CR4 4NA telephone 01-640 3366.

### CONDITIONS FOR ADVERTISEMENT IN LIGHTING + SOUND INTERNATIONAL

The Publishers reserve the right to refuse any advertisement—whether pre-paid or not—and without reasons being given for any such refusal. The Publishers accept no liability for any loss or damage by an error or inaccuracy in the printing of any advertisement.

# THE MANHATTAN FOGGER ELITE

Mark II Version  
Now Available



## FEATURES INCLUDE:

- ★ PORTABLE
- ★ FULLY REMOTABLE
- ★ LOW RUNNING COSTS
- ★ INTERNAL OR EXTERNAL LIQUID TANKS
- ★ DOES NOT REQUIRE CO2 OR COMPRESSED AIR CANNISTERS
- ★ AUTOMATIC CONTROL
- ★ 9 DIFFERENT SMOKE FRAGRANCES
- ★ TOTALLY BRITISH MADE



**MANHATTAN**  
Sound & Light

For further information contact:

**49 Atalanta Street,  
Unit L1, Multistore, London SW6.  
Tel: 01-385 2487**



# DIRECTORY

## VEL

- Leading developers and distributors of video projection systems
- Video high-quality picture screens up to 20 ft.
- Hire, lease or purchase as a package with superb disco sound
- Agents for: BARCO, THOMSON, J.V.C., CITRONIC, VEE-JAY.
- Video horse and greyhound racing systems available for charity, social or fund-raising events.

For full details contact the professionals.  
**VIDEO ENTERTAINMENTS LTD**  
 Unit 11, Algernon Industrial Estate, Sharnoor,  
 Newcastle upon Tyne NE27 0NB. Tel: (091) 2514514



**Flame Retardant Cyc's, Tabs, Legs, Flags, Nets Gauzes made to order.**

**P&G Draperies Ltd**

15 Park St., Swinton, Manchester M27 1UG  
 061-793 5848 London: 01-965 8188

"That's blown it!"

"Yeh! quick phone **PRIMARC** for replacement lamps **NOW!**"

For all your stage & studio lamp needs

**READING (0734) 596777**

121 Loverock Road Reading Berks. RG3 1DZ



**Concord Controls**

**THEATRE LIGHTING**

- Good Design
- Reliability
- Systems Designed Free of Charge
- National Distributorship

Phone us for Further Information

Unit 3, Dawson Road, Mount Farm Bletchley, MK1 1LH (0908) 644366

**MUSICRAFT LTD.**

**LIGHT AND SOUND**

LEADING STOCKISTS OF ALL LEADING BRANDS INCLUDING:

CITRONIC - FAL - PULSAR  
 OPTIKINETICS - ICE - BOSE - SHURE  
 MCKENZIE - CELESTION

RSC Franchisee dealer

Manufacturers of sound to light units, pre-amps, high voltage amplifiers, speakers and cabinets.

OVERSEAS ORDERS TAKEN —  
 303 Edgware Road, London W2 1BS.  
 Tel: 01-402 9729/01-402 2898.

**LIGHTING HIRE SALES SPECIAL FX**

**STAGE CONTROL LTD.**

STATION PARADE,  
 WHITCHURCH LANE,  
 EDGWARE, MIDDX. HA8 6RW

TEL: 01 952 8982  
 TELEX: 924896

**NORTHERN LIGHTS**

**Sound & Lighting Distributors**

Trade representation for

**OPTIKINETICS  
 POWERDRIVE  
 LE MAITRE  
 TEXTLITE  
 ZERO 88  
 PULSAR  
 CLOUD  
 SHURE  
 SATEL  
 MODE  
 EDC  
 ICE**

89 Scotforth Road, Lancaster.  
 Tel: 0524 62634.

**SOUTH WEST LIGHTING**

SALES: PAUL GOODY, 2 STAPLAKE RD, STARCROSS, EXETER, STARCROSS (0639) 890806.

**QUALITY GUARANTEED**

Pinspots £6.35  
 Helicopters £65.00  
 and many more

Send for details to:  
 Paul Goody, South West Lighting,  
 2 Staplake Road, Starcross, Exeter  
 or telephone 0626-890806

Area Dealers/DJ's required

**J.S.G.**

104/6/88 Main Street, Bingley, West Yorkshire, BD16 2JH.  
 Telephone: Bradford (0274) 568843/564388/561044.

**For Professional Planning, Supply, Installation & Commissioning of your Sound System**

Main Agents for:

TURBOSOUND · MARTIN AUDIO · BOSE · TANNOY  
 JBL · ELECTROVOICE · TOA · STUDIOMASTER  
 PEAVEY · CARLSBRO · HIT · H/H · SOUNDCRAFT

For Information and Advice  
 phone PAUL SMITH

**NIGHT FLIGHT**

Sound and Lighting

**THE BIG ONE IN SCOTLAND**

Installation, Design,  
 Hire, Repair and Service  
 0389-79261

**FIBRE OPTIC LIGHTING**

- ★ Fibre ★ Lenses ★ Signs ★
- ★ Fibrelights ★ Sources ★
- ★ Lamps ★ Curtain Kits ★
- ★ Edge-Lighting ★
- ★ Interior/Exterior ★
- ★ Ceilings ★ Under-Water ★

Trade and Export call  
**Paul Raymond (24 hours)**

PAR OPTI PROJECTS LIMITED  
 Unit 9, Chiswick Park Industrial Estate, Cunnington Street, London W4 5EP



Tel: 01-995 5179


**Audio Electronics Ltd.**

Elm Place, Station Road,  
 Rustington, West Sussex.  
 Telephone: Rustington 0903 786483.

**Manufacturers of High Quality P.A. Loudspeakers and Units.**

**LIGHTING HIRE & SALES Philip L. Edwards (Theatre Lighting)**

5 Highwood Close, Glossop,  
 Derbyshire SK13 9PH.  
 Telephone: 04574 62811.



- Library and Custom made Gobos and Slides.
- Screen Printing onto various Materials.
- Standard and Custom Fibre-Optic Effects and Equipment.

For further information Contact:  
**DHA Lighting Ltd., 7 Bishops Terrace, Kennington, London SE11 4UE.**  
 Tel: 01-582 3600 Telex: 935639 Goboco G

**CCT**  
**01-640 3366**

- MANUFACTURE • SALE
- HIRE • Theatre and T.V. Studio Lighting
- Projectors and Effects
- Installations
- Lighting Designers
- Sales Conference
- Product Launches/Presentations

**CCT**  
**theatre lighting**  
 Head Office  
 Windsor House 26, Willow Lane,  
 Mitcham, Surrey. CR4 4NA  
 Telex: 946648

Western: CCT Theatre Lighting Ltd.  
 Unit 9, Ferry Steps Industrial Estate,  
 St. Phillips, Bristol BS2 0XW.  
 Tel: (0272) 774074

**WL**  
**WHITE LIGHT**  
 57 FILMER ROAD, LONDON SW6  
 TEL: 01-731 3291

**THEATRE LIGHTING HIRE & SALES**

FREE POCKET HIRE CATALOGUE ON REQUEST

NORTHERN BRANCH  
 Saw Hill Farm, Dean Lane, Triangle,  
 Nr. Halifax, West Yorkshire.  
 Tel: Halifax (0422) 822016

**UPDATE**

- ★ Sound and lighting equipment hire
- ★ Le Maitre special effects stockist
- ★ Installation service and one night stands available
- ★ Special promotions
- ★ Competitive rates and efficient service

Call us for colour brochure and price lists

STAGE TWO LTD  
 197 Watford Road, Croxley Green,  
 Herts WD3 3EH  
 Watford (0923) 30789

**CCT**  
**SUPERSTORE**  
**SALE**

- LAMPS • SPARES • ACCESSORIES
- TOOLS • TAPE
- CABLE • PLUGS • SOCKETS • CREW
- THEATRE BOOKS
- RECORDS • COLOUR MEDIA AND MANY OTHER ALLIED PRODUCTS
- CABLE
- LIGHTING
- LIGHTING CONTROL EQUIPMENT

**HIRE**

- RIGGING • EFFECTS
- SMOKE MACHINES
- STANDS • ICE MACHINES

Weekdays 9 - 6pm  
**opens Sats 10 - 1pm**  
**01-622 6240**

Order by telephone, pay by Access or Barclaycard.

28a Grafton Square,  
 Clapham, London. SW4 0DB

**ANY** tronics  
 manufacturers of high quality.

- ★ Strobes
- ★ Lighting Control Equipment
- ★ Amplification

trade & export enquiries most welcome

**Anytronics Limited**  
 8 Hillside Ind. Estate  
 London Rd., Horndean  
 Hants. PO8 0BL, England  
**Tel: (0705) 599410**  
**Telex: 869185**

**SPOT ON FOR QUALITY**

**LUTON SOUND & LIGHTING**

Sound, Lighting and special effects for leisure, promotion, entertainment and the arts.

- First class technical back-up.
- In-depth stocking at the best prices.
- Speedy mail order and export service.
- Instant credit to qualifying customers.
- Also suppliers to trade.

Brochure on request.

**LUTON SOUND & LIGHTING**  
 75 & 82-88 Wellington Street,  
 Luton, LU1 5AA, England.  
 Telephone: 0582 411733 (5 lines)  
 Telex: 825353/825562 CHACOM G LITECO

**TRAFALGAR LIGHTING LTD.**

**01-360 0936**  
 LIGHTING SALES-HIRE  
 SECONDHAND KIT BOUGHT & SOLD  
**01-360 0936**

**MAC manchester**

Professional sound hire nationwide

- High quality communications systems
- Sales and service facilities



Telephone **061-969 8311**  
 1 & 2 Attenburys Park,  
 Park Road, Altrincham,  
 Cheshire, WA14 5QE.

**W.B. Group**  
 cover the complete lighting spectrum from film to T.V., theatre to disco special & motorised effects

**Only the best is good enough**

**W.B. Group**  
 4 Tenter Rd., Moulton Park Ind. Est.,  
 Northampton NN3 1PZ  
**Tel: (0604) 499331**

**eurolight**

**1 THE ONE STOP THEATRE SHOP**

FOR ALL YOUR THEATRE LIGHTING REQUIREMENTS

At the Theatre Projects Shop  
 EUROLIGHT (MSL) LTD. 10/16 Mercer Street, London WC2H 9QE  
 Telephone: 01-836 7877 and 061-273 4003

**Advertisers Index**

|                             |            |
|-----------------------------|------------|
| Audio Electronics           | 62 & 31    |
| Avitec                      | 50         |
| CCT                         | 63 & 17    |
| Cerebrum Lighting           | 2          |
| (Sales and Hire) Ltd.       |            |
| Coemar WB Lighting          | 12, 13, 63 |
| Futurist                    | 56         |
| HBB                         | 47         |
| ILP                         | 9          |
| JiveLight Ltd.              | 11         |
| Laserpoint                  | 24         |
| Iain Macfarlane Exhibitions | Insert     |
| Le Maitre                   | 4          |
| Light and Sound Show 86     | 8          |
| Manhattan Sound and Light   | 60         |

**W...M...S**

Lighting Design  
 Equipment Rental  
 Lighting Engineers

London 01-928 0622

**Strand Lighting**

- Stage & TV Lighting
- Lighting Control Equipment
- Effects Projectors
- Colour Filters
- Dealers Throughout the UK

Rank Strand Limited,  
 P.O. Box 51, Great West Road,  
 Brentford, Middlesex TW8 9HR  
**01 568 9222**



# **TIME. AND TIME AGAIN.**

**The new production of Time uses conventional lighting, complex control systems and Vari-Lites. And no small amounts of skill, experience and creativity.**

**We're proud to have played a part.**

**If you'd like to use the same resources on your next production, give us a call: Gary Brown at Theatre Projects Services on 01- 622 4272, or Jimmy Barnett at Samuelson Vari-Lite on 01-208 0011.**

**SAMUELSON GROUP**